



SEQUENCE LISTING

<110> Cunningham, Philip R.

<120> METHODS AND COMPOSITIONS FOR THE
IDENTIFICATION OF ANTIBIOTICS THAT ARE NOT SUSCEPTIBLE TO
ANTIBIOTIC RESISTANCE

<130> WSV-2597

<140> 10/612224

<141> 2003-07-01

<150> 60/393237

<151> 2002-07-01

<150> 60/452012

<151> 2003-03-05

<160> 245

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 10903

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 1

```
gacgccgggc aagagcaact cggtcgccgc atacactatt ctcagaatga cttgggtgag 60
tactcaccag tcacagaaaa gcatcttacg gatggcatga cagtaagaga attatgcagt 120
gctgccataa ccatgagtga taacactgcg gccaaacttac ttctgacaac gatcggagga 180
ccgaaggagc taaccgcttt ttgcacaac atgggggatac atgtaactcg cttgatcgt 240
tggaaccgg agctgaatga agccatacca aacgacgagc gtgacaccac gatgcctgca 300
gcaatggcaa caacgttgcg caaactatta actggcgaac tacttactct agcttcccgg 360
caacaattaa tagactggat ggaggcggat aaagttgcag gaccacttct gcgctcggcc 420
cttcgggctg gctggtttat tgctgataaa tctggagccg gtgagcgtgg gtctcgcggg 480
atcattgcag cactggggcc agatggtaag cctcccgtta tctagattat ctacacgacg 540
gggagtcagg caactatgga tgaacgaaat agacagatcg ctgagatagg tgcctcactg 600
attaagcatt ggtaactgtc agaccaagtt tactcatata tacttttagat tgatttaaaa 660
cttcattttt aatttaaaag gatctagggt aagatccttt ttgataatct catgaccaa 720
atcccttaac gtgagttttt gttccactga gcgtcagacc ccttaataag atgatcttct 780
tgagatcggt ttggtctgcg cgtaatctct tgctctgaaa acgaaaaaac cgccttgacg 840
ggcgggtttt cgaagggtct ctgagctacc aactctttga accgaggtaa ctggccttga 900
ggagcgcagt caccaaaaact tgtcctttca gtttagcctt aaccggcgca tgacttcaag 960
actaactcct ctaaatcaat taccagtggc tgctgccagt ggtgcttttg catgtctttc 1020
cgggttggac tcaagacgat agttaccgga taaggcgcag cggtcggact gaacgggggg 1080
ttcgtgcata cagtccagct tggagcgaac tgcctaccgg gaactgagtg tcaggcgtgg 1140
aatgagacaa acgcggccat aacagcggaa tgacaccggt aaaccgaaag gcaggaacag 1200
gagagcgcac gagggagccg ccagggggaa acgcctggta tctttatagt cctgtcgggt 1260
ttcgccacca ctgatttgag cgtcagattt cgtgatgctt gtcagggggg cggagcctat 1320
ggaaaaacgg ctttgccgcg gccctctcac ttccctgtta agtatcttcc tggcatcttc 1380
caggaaatct ccgccccgtt cgtaagccat ttccgctcgc cgcagtcgaa cgaccgagcg 1440
tagcgagtca gtgagcgagg aagcggaata tatcctgtat cacatattct gctgacgcac 1500
cgggtgcagc ttttttctcc tgccacatga agcacttcac tgacaccctc atcagtgcca 1560
acatagtaag ccagtataca ctccgctagc atcgtccatt ccgacagcat cgcagtcac 1620
```

tatggcggtgc	tgctagcgct	atatgcggtt	atgcaatttc	tatgcgcacc	cgttctcgga	1680
gcactgtccg	accgctttgg	ccgccgccca	gtcctgctcg	cttcgctact	tggagccact	1740
atcgactacg	cgatcatggc	gaccacaccc	gtcctgtgga	tcctctacgc	cggacgcata	1800
gtggccggcc	acgatgcgtc	cgcgtagag	gatctattta	acgaccctgc	cctgaaccga	1860
cgaccgggtc	gaatttgctt	tcgaatttct	gccattcatc	cgcttattat	cacttattca	1920
ggcgtagcac	caggcgttta	agggcaccaa	taactgcctt	aaaaaaatta	cgccccgccc	1980
tgccactcat	cgcagtactg	ttgtaattca	ttaagcattc	tgccgacatg	gaagccatca	2040
cagacggcat	gatgaacctg	aatcgccagc	ggcatcagca	ccttgctgcc	ttgctgataa	2100
tatttgccca	tggtgaaaac	gggggcgaag	aagttgtcca	tattggccac	gtttaaatac	2160
aaactgggtg	aactcaccga	gggattggct	gagacgaaaa	acataattctc	aataaacctt	2220
ttagggaaat	aggccagggt	ttcaccgtaa	cacgccacat	cttgcgataa	tatgtgtaga	2280
aactgccgga	aatcgctcgt	gtattcactc	cagagcgatg	aaaacgtttc	agtttgctca	2340
tggaaaacgg	tgtaacaagg	gtgaacacta	tcccatatca	ccagctcacc	gtctttcatt	2400
gccatacggg	attccggatg	agcattcatc	aggcgggcaa	gaatgtgaat	aaaggccgga	2460
taaaactttg	gcttattttt	ctttacggtc	tttaaaaagg	ccgtaatatc	cagctgaacg	2520
gtctgggtat	aggtacattg	agcaactgac	tgaatgcctt	caaaatgttc	tttacgatgc	2580
cattgggata	tatcaacggg	ggtatatcca	gtgatttttt	tctccatttc	tcgagcacac	2640
tgaagcggc	cgcttccaca	cattaaacta	gttcgatgat	taattgtcaa	cagctcgccg	2700
ctatatcggt	tgatgcaatt	tctatgcgca	cccgttctcg	gagcactgtc	cgaccgcttt	2760
ggccgcccgc	cagtcctgct	cgcttcgcta	cttgagacca	ctatcgacta	cgcatcatg	2820
gcgaccacac	ccgtcctgtg	gatcccagac	gagttaagtc	accatacgtt	agtacagggt	2880
gccactcttt	tggcagacgc	agacctacgg	ctacaatagc	gaagcgggtc	tggtattcat	2940
gtttaaaaat	actgtcgcga	tagccaaaac	ggcactcttt	ggcagttaag	cgcacttgct	3000
tgctgtcgcc	cagttcaaca	gaatcaacat	aagcgcgaac	tcgctgtaat	tctacgccat	3060
aagcaccaat	attctgggata	ggtgatgagc	cgacacaacc	aggaattaat	gccagatttt	3120
ccagaccagg	cataccttcc	tgcaaagtgt	atthttaccg	acgatgccag	ttttctccgg	3180
ctcctacatg	taaataccac	gcatacaggt	catcatgaat	ttcgatacct	ttgatccggg	3240
tgatgatcac	cgtgcgcgca	tagtcctcca	gaaaaagtac	attacttctc	tcaccagaa	3300
taagaacggg	ttgtccttct	gcggttgcat	aactgccaggc	attgagtaat	tgtgttctgt	3360
cttcggcaca	tacaatgtgc	tgagcattat	gatcaatgcc	aaatgtgttc	cagggtttta	3420
aggagtgggt	catagctgct	ttcctgatgc	aaaaacgagg	ctagtthtacc	gtatctgtgg	3480
ggggatggct	tgtagatatg	acgacaggaa	gagtttgtag	aaacgcacaa	aggccatccg	3540
tcaggatggc	cttctgctta	atthgatgcc	tggcagttta	tggcggggct	cctgcccggc	3600
accctccggg	ccgttgcttc	gcaacgttca	aatccgctcc	cgccggattt	gtcctactca	3660
ggagagcggt	caccgacaaa	caacagataa	aacgaaaggc	ccagtctttc	gactgagcct	3720
ttcgthttat	ttgatgcctg	gcagttccct	actctcgcat	ggggagaccc	cacactacca	3780
tcggcgctac	ggcgthttac	ttctgagttc	ggcatggggg	cagggtggag	caccgcgcta	3840
ctgcgcggag	gcacaaattct	ttttatcaga	ccgcttctgc	gttctgattt	aatctgtatc	3900
aggctgaaaa	tcttctctca	tccgccaaaa	cagcttcggc	gttgtaagggt	taagcctcac	3960
ggttcattag	taccgggttag	ctcaacgcac	cgctgcgctt	acacacccgg	cctatcaacg	4020
tcgtcgtctt	caacgttctc	tcaggaccct	taaagggtca	gggagaactc	atctcggggc	4080
aagtttcgtg	cttagatgct	ttcagcactt	atctcttccg	catttagcta	ccgggcagtg	4140
ccattggcat	gacaacccga	acaccagtga	tgcttccact	ccggtcctct	cgtactagga	4200
gcagccccc	tcagttctcc	agcggccacg	gcagataggg	accgaactgt	ctcacgacgt	4260
tctaaaccca	gctcgcgtac	cactttaaat	ggcgaacagc	catacccttg	ggacctactt	4320
cagccccagg	atgtgatgag	ccgacatcga	ggtgccaaaac	accgccgtcg	atatgaactc	4380
ttgggcggta	tcagcctggt	atccccggag	taccttttat	ccgttgagcg	atggcccttc	4440
cattcagaac	caccggatca	ctatgacctg	ctttcgcacc	tgctcgcgcc	gtcacgctcg	4500
cagtcaagct	ggcttatgcc	attgcactaa	cctcctgatg	tccgaccagg	attagccaac	4560
cttcgtgctc	ctccgttact	ctttaggagg	agaccgcccc	agtcaaaacta	cccaccagac	4620
actgtccgca	accgggatta	cggttcaacg	ttagaacatc	aaacattaaa	gggtgggtatt	4680
tcaaggctcg	ctccatgcag	actggcgctc	acacttcaaa	gcctccacc	tatcctacac	4740
atcaaggctc	aatgttcagt	gtcaagctat	agtaaagggt	cacgggggtc	ttccgtcttg	4800
ccgcgggatc	actgcactct	cacagcgagt	tcaatttcac	tgagtctcgg	gtggagacag	4860
cctggccatc	attagcccat	tcgtgcaggt	cggaacttac	ccgacaagga	atttcgctac	4920
cttaggaccg	ttatagttac	ggccgcccgt	caccggggct	tcgatcaaga	gcttcgcttg	4980
cgctaacccc	atcaattaac	cttccggcac	cgggcaggcg	tcacaccgta	tacgtccact	5040
ttcgtgtttg	cacagtgtcg	tgthtttaat	aaacagttgc	agccagctgg	tatcttcgac	5100
tgatttcagc	tccatcccg	agggacctca	cctacatata	agcgtgcctt	ctcccgaagt	5160
tacggcacca	ttttgcctag	ttccttcacc	cgagttctct	caagcgcctt	gggtattctct	5220
acctgaccac	ctgtgtcggt	ttgggggtacg	atthgatggt	acctgatgct	tagaggcttt	5280

tcttggaagc	agggcatttg	ttgcttcagc	accgtagtgc	ctcgtcatca	cgcctcagcc	5340
ttgattttcc	ggattttgct	ggaaaaccag	cctacacgct	taaaccggga	caaccgtcgc	5400
cgggccaaca	tagccttctc	cgtcccccct	tcgcagtaac	accaagtaca	ggaatattaa	5460
cctgtttccc	atcgactacg	cctttcggcc	tcgccttagg	ggtcgactca	ccctgccccg	5520
attaacgttg	gacaggaacc	cttgggtcttc	cggcgagcgg	gctttttcacc	cgctttatcg	5580
ttacttatgt	cagcattcgc	acttctgata	cctccagcat	gcctcacagc	acaccttcgc	5640
aggcttacag	aacgctcccc	tacccaacaa	cgcataagcg	tcgctgccgc	agcttcgggtg	5700
catggtttag	ccccgttaca	tcttcgcgcg	aggccgactc	gaccagttag	ctattacgct	5760
ttctttaaat	gatggctgct	tctaagccaa	catcctgggt	gtctgggcct	tcccacatcg	5820
tttcccactt	aaccatgact	ttgggacctt	agctggcggt	ctgggttgtt	tccctcttca	5880
cgacggacgt	tagcaccgcg	cgtgtgtctc	cctgtataac	attctccggt	attcgcagtt	5940
tgcacggggt	tggtaagtcg	ggatgacccc	cttgccgaaa	cagtgtctta	cccccgagga	6000
tgaattcacg	aggcgctacc	taaatagctt	tcggggagaa	ccagctatct	cccggtttga	6060
ttggcctttc	acccccagcc	acaagtcctc	cgctaatttt	tcaacattag	tcgggttcgggt	6120
cctccagtta	gtgttaccca	accttcaacc	tgcccatggc	tagatcaccg	ggtttcgggt	6180
ctataccctg	caacttaacg	cccagttaag	actcggtttc	ccttcgggtc	ccctattcgg	6240
ttaaccttgc	tacagaatat	aagtcgctga	cccattatac	aaaaggtagc	cagtcacacg	6300
cctaagcgtg	ctcccactgc	ttgtacgtac	acggtttcag	gttctttttc	actccccctg	6360
cgggggttct	tttcgccttt	ccctcacggg	actggttcac	tatcggtcag	tcaggagtat	6420
ttagccttgg	aggatgggtc	cccatatttc	agacaggata	ccacgtgtcc	cgccctactc	6480
atcgagctca	cagcatgtgc	atttttgtgt	acggggctgt	caccctgtat	cgcgcgcctt	6540
tccagacgct	tccactaaca	cacacactga	ttcaggctct	gggtgtctcc	ccgttcgctc	6600
gccgctactg	ggggaatctc	ggttgatttc	ttttcctcgg	ggtacttaga	tgtttcagtt	6660
cccccggttc	gcctcattaa	cctatggatt	cagttaatga	tagtgtgtcg	aaacacactg	6720
ggttttcccca	ttcggaaatc	gccggttata	acggttcata	tcaccttacc	gacgcttata	6780
gcagattagc	acgtccttca	tcgcctctga	ctgccagggc	atccaccgtg	tacgcttagt	6840
cgcttaacct	cacaacccga	agatgtttct	ttcgattcat	catcgtgttg	cgaaaatttg	6900
agagactcac	gaacaactct	cgttgctcag	tgtttcaatt	ttcagcttga	tccagatttt	6960
taaagagcaa	aaatctcaaa	catcacccga	agatgagttt	tgagatatta	aggtcggcga	7020
ctttcactca	caaaccagca	agtggcgctc	cctaggggat	tcgaacccct	gttaccgcgc	7080
tgaaggggcg	gtgtcctggg	cctctagacg	aaggggacac	gaaaattgct	tatcacgcgt	7140
tgcgtgatat	tttcgtgtag	ggtgagcttt	cattaataga	aagcgaacgg	ccttattctc	7200
ttcagcctca	ctcccaacgc	gtaaacgcct	tgcttttcac	tttctatcag	acaatctgtg	7260
tgagcactac	aaagtacgct	tctttaaggt	aagtgtgtga	tccaaccgca	ggttcccccta	7320
cggttacctt	gttacgactt	caccccagtc	atgaatcaca	aagtggtaag	cgccctccccg	7380
aagggttaagc	tacctacttc	ttttgcaacc	cactccccatg	gtgtgacggg	cgggtgtgtac	7440
aaggcccggg	aacgtattca	ccgtggcatt	ctgatccacg	attactagcg	attccgactt	7500
catggagtcg	agttgcagac	tccaatccgg	actacgacgc	actttatgag	gtccgcttgc	7560
tctcgcgagg	tcgcttctct	ttgtatgcgc	cattgtagca	cgtgtgtagc	cctgggtcgta	7620
agggccatga	tgacttgacg	tcatccccac	cttcctccag	tttatcactg	gcagtctcct	7680
ttgagttccc	ggccggaccg	ctggcaacaa	aggataaggg	ttgcgctcgt	tgccgggactt	7740
aaccacaacat	ttcacaacac	gagctgacga	cagccatgca	gcacctgtct	cacggttccc	7800
gaaggcacat	tctcatctct	gaaaacttcc	gtggatgtca	agaccaggta	aggttcttcg	7860
cgttgcatcg	aattaaacca	catgtctcac	cgcttgtgcg	ggcccccgtc	aattcatttg	7920
agttttaacc	ttgcggccgt	actccccagg	cggtcgactt	aacgcgttag	ctccggaagc	7980
cacgcctcaa	gggcacaacc	tccaagtcga	catcgtttac	ggcgtggact	accagggtat	8040
ctaactctgt	ttgtcccca	cgctttcgca	cctgagcgtc	agtcttcgtc	caggggggccg	8100
ccttcgccac	cggatttcct	ccagatctct	acgcatttca	ccgctacacc	tggaattcta	8160
ccccctctta	cgagactcaa	gcttgccagt	atcagatgca	gttcccagggt	tgagccccggg	8220
gatttcacat	ctgacttaac	aaaccgcctg	cgtgcgcttt	acgcccagta	attccgatta	8280
acgcttgac	cctccgtatt	accgcggctg	ctggcacgga	gttagccgggt	gcttcttctg	8340
cgggtaacgt	caatgagcaa	aggtattaac	tttactccct	tcctccccgc	tgaaagtact	8400
ttacaacccg	aaggccttct	tcatacacgc	ggcatggctg	catcaggctt	gcgcccattg	8460
tgcaatatct	cccactgctg	cctcccggtg	gagctcggac	cgtgtctcag	ttccagtgtg	8520
gctgggtcatc	ctctcagacc	agctagggat	cgtcgcctag	gtgagccggt	accccaccta	8580
ctagctaate	ccatctgggc	acatccgatg	gcaagaggcc	cgaagggtccc	cctcttttgt	8640
cttgcgacgt	tatgcggtat	tagctaccgt	ttccagtagt	tatccccctc	catcaggcag	8700
tttcccagac	attactcacc	cgtccgccac	tcgtcagcaa	agaagcaagc	ttcttctctg	8760
taccgttcga	cttgcatgtg	ttaggcctgc	cgccagcgtt	caatctgagc	catgatcaaa	8820
ctcttcaatt	taaaagtttg	acgctcaaag	aattaaactt	cgtaatgaat	tacgtgttca	8880
ctcttgagac	ttggtattca	tttttcgtct	tgcgacgtta	agaatccgta	tcttcgagtg	8940

```

cccacacaga ttgtctgata aattgtttaa gagcagtgcc gcttcgcttt ttctcagcgg 9000
ccgctgtgtg aaattgttat ccgctcacaa ttccacacat tatacgagcc ggaagcataa 9060
agtgtaaagc ctgggggtgcc taatgagtga gctaactcac attaattgcy ttgcgctcac 9120
tgccccgttt ccagtcggga aacctgtcgt gccagctgca ttaatgaatc ggccaacgcy 9180
cggggagagg cggtttgctt attgggcgcc aggggtggtt ttcttttcac cagtgaagcy 9240
ggcaacagct gattgccctt caccgcctgg cctgagaga gttgcagcaa gcggtccacg 9300
ctggtttgcc ccagcaggcy aaaatcctgt ttgatggtgg ttgacggcgg gatataacat 9360
gagctgtctt cggtatcgtc gtatcccact accgagatat ccgcaccaac gcgcagcccg 9420
gactcggtaa tggcgcgcat tgcgcccagc gccatctgat cgttggcaac cagcatcgca 9480
gtgggaacga tggcctcatt cagcatttgc atggtttgtt gaaaaccgga catggcactc 9540
cagtcgcctt cccgttccgc tatcggctga atttgattgc gagtgaataa tttatgccag 9600
ccagccagac gcagacgcgc cgagacagaa cttaatgggc ccgctaacag cgcgatttgc 9660
tggtgaccca atgcgaccag atgctccacg ccagtcgcy taccgtcttc atgggagaaa 9720
ataatactgt tgatgggtgt ctggtcagag acatcaagaa ataacgcccg aacattagt 9780
caggcagctt ccacagcaat ggcatcctgg tcatccagcy gatagttaat gatcagcca 9840
ctgacccgtt gcgcgagaag attgtgcacc gccgctttac aggccttcgac gccgcttcgt 9900
tctaccatcg acaccaccac gctggcacc caggtgatcgg cgcgagattt aatcgcccg 9960
acaatttgcg acggcgcggt cagggccaga ctggagggtg caacgccaat cagcaacgac 10020
tggttgcccg ccagttgttg tgccacgcy ttgggaatgt aattcagctc cgccatcgcc 10080
gcttccactt tttccgcgt tttcgagaa acgtggctgg cctgggtcac cagcgggaa 10140
acggctctgat aagagacacc ggcatactct gcgacatcgt ataacgttac tggtttcaca 10200
ttcaccaccc tgaattgact ctcttcggg cgctatcatg ccataccgcy aaaggttttg 10260
caccattcga tgggtgtcga tcctagagcy cagcaatgag ggccgacagg aagcaaagct 10320
gaaaggaatc aaatttgcc gcaggcgatc cgtggacagg aacgtcgtgc tgacgcttca 10380
tcagaagggc actggtgcaa cggaaattgc tcatcagctc agtattgccc gctccacggt 10440
ttataaaatt cttgaagacg aaaggccctc gtgcatacgc ctatttttat aggttaatgt 10500
catgataata atggtttctt agacgtcagg tggcactttt cggggaaatg tgcgcggaac 10560
ccctatttgt ttatttttct aaatacattc aaatagtat cgcgtcatga gacaataaac 10620
ctgataaatg cttcaataat attgaaaaag gaagagtatg agtattcaac atttccgtgt 10680
cgcccttatt cccttttttg cggcattttg ccttctctgt tttgctcacc cagaaacgct 10740
ggtgaaagta aaagatgctg aagatcagtt ggggtgcacga gtgggttaca tcgaactgga 10800
tctcaacagc ggtaagatcc ttgagagttt tcgccccgaa gaacgttttc caatgatgag 10860
cacttttaaa gttctgctat gtggcgcggt attatccgt gtt 10903

```

<210> 2

<211> 11918

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 2

```

gacaccttac gccggacgca tcgtggccgg ccacgatgcy tccggcgtag aggatctatt 60
taacgaccct gccctgaacc gacgaccggg tcgaatttgc tttcgaattt ctgccattca 120
tccgcttatt atcacttatt caggcgtagc accaggcggt taagggcacc aataactgcc 180
ttaaaaaaat tacgccccgc cctgccactc atcgcagtag tgttgtaatt cattaagcat 240
tctgccgaca tggaagccat cacagacggc atgatgaacc tgaatcgcca gcggcatcag 300
caccttgctg ccttgcggtat aatatttgcc catggtgaaa acgggggcca agaagttgtc 360
catattggcc acgtttaaat caaaactggg gaaactcacc cagggtattg ctgagacgaa 420
aaacataatt tcaataaacc cttaggggaa ataggccagg ttttcaccgt aacacgccac 480
atcttgcgaa tatatgtgta gaaactgccg gaaatcgctg tggatttcac tccagagcga 540
tgaaaacggt tcagtttgct catggaaaac ggtgtaacaa ggggtgaacac tatcccatat 600
caccagctca cgtcttttca ttgccatacg gaattccgga tgagcattca tcaggcgggc 660
aagaatgtga ataaaggccg gataaaactt gtgcttattt ttctttacgg tctttaaaaa 720
ggccgtaata tccagctgaa cggctctggt ataggtacat tgagcaactg actgaaatgc 780
ctcaaaatgt tctttacgat gccattggga tatatcaacg gtggtatatc cagtattttt 840
tttctccatt tgccggaggga tatgaaagcy gccgcttcca cacattaac tagttcgatg 900
attaattgtc aacagctcgc cggcggcacc tcgctaacgy attcaccact ccaagaattg 960

```

gagccaatcg	attcttgccg	agaactgtga	atgcgcgaaac	caacccttgg	cagaacatat	1020
ccatcgcgtc	cgccatctcc	agcagccgca	cgcgggcgcat	ctcggggcagc	gttgggtcct	1080
ggccacgggt	gcgcatgata	gtgctcctgt	cggtgaggac	ccggctagga	tggcgggggt	1140
gccttactgg	ttagcagaat	gaatcaccga	tacgcgagcg	aacgtgaagc	gactgctgct	1200
gcaaaacgtc	tgcgacctga	gcaacaacat	gaatgggtctt	cggtttccgt	gtttcgtaaa	1260
gtctggaaac	gcggaagtca	gcgccttgca	ccattatggt	ccggatctgg	gtaccgagct	1320
cgaattcact	ggcgcgtcgt	ttacaacgtc	gtgactggga	aaaccctggc	gttaccacaac	1380
ttaatcgctt	tgcagcacat	ccccctttcg	ccaggcatcg	caggatgctg	ctggctaccc	1440
tgtggaacac	ctacatctgt	attaacgaag	cgctggcatt	gaccctgagt	gattttttctc	1500
tggccccgcc	gcattccatac	cgccagttgt	ttaccctcac	aacgttccag	taaccgggca	1560
tgttcacat	cagtaaccgg	tatcgtgagc	atcctctctc	gtttcatcgg	tatcattacc	1620
cccatgaaca	gaaattcccc	cttacacgga	ggcatcaagt	gaccaaacag	gaaaaaacgg	1680
cccttaacat	ggcccgcttt	atcagaagcc	agacattaac	gcttctggag	aaactcaacg	1740
agctggacgc	ggatgaacag	gcagacatct	gtgaatcgct	tcacgaccac	gctgatgagc	1800
tttaccgcag	ctgcctcgcg	cggttcgggtg	atgacgggtga	aaacctctga	cacatgcagc	1860
tcccggagac	ggtcacagct	tgtctgtaag	cggatgccgg	gagcagacaa	gcccgtcagg	1920
gcgcgtcagc	gggtgttggc	gggtgtcggg	gcgcagccat	gaccagtcga	cgtagcgata	1980
gcggagtgtg	tactggctta	actatgcggc	atcagagcag	attgtactga	gagtgcacca	2040
tatgcgggtg	gaaataccgc	acagatgcgt	aaggagaaaa	taccgcatca	ggcgctcttc	2100
cgcttctctg	ctcactgact	cgctgcgctc	ggctcggtcg	ctgcggcgag	cggtatcagc	2160
tcactcaaag	gcggtaatac	ggttatccac	agaatcaggg	gataacgcag	gaaagaacat	2220
gtgagcaaaa	ggccagcaaa	aggccaggaa	ccgtaaaaag	gccgcgttgc	tggcggtttt	2280
ccataggctc	cgcccccttg	acgagcatca	caaaaatcga	cgctcaagtc	agaggtggcg	2340
aaacccgaca	ggactataaa	gataccaggc	gtttccccct	ggaagctccc	tcgtgcgctc	2400
tcctgttccg	accctgccgc	ttaccggata	cctgtccgcc	tttctccctt	cggggaagcgt	2460
ggcgctttct	catagctcac	gctgtaggta	tctcagttcg	gtgtaggtcg	ttcgctccaa	2520
gctgggtgtg	gtgcacgaac	ccccggttca	gcccgcagcc	tgcgccttat	ccggttaacta	2580
tcgtcttgag	ccaacccgg	taagacacga	cttatcgcca	ctggcagcag	ccactggtaa	2640
caggattagc	agagcgaggt	atgtaggcgg	tgctacagag	ttcttgaagt	ggtggccctaa	2700
ctacggctac	actagaagga	cagtatttgg	tatctgcgct	ctgctgaagc	cagttacctt	2760
cggaaaaaga	gttggttagct	cttgatccgg	caaacaacc	accgctggta	gcggtggttt	2820
ttttgtttgc	aagcagcaga	ttacgcgcag	aaaaaaagga	tctcaagaag	atcctttgat	2880
cttttctacg	gggtctgacg	ctcagtgga	cgaaaactca	cgtaagggga	ttttggtcat	2940
gagattatca	aaaaggatct	tcacctagat	cctttttaat	taaaaatgaa	gtttttaaate	3000
aatctaaagt	atatatgagt	aaacttggtc	tgacagttac	caatgcttaa	tcagttaggc	3060
acctatctca	gcgatctgtc	tatttcgttc	atccatagtt	gcctgactcc	ccgtcgtgta	3120
gataactacg	atacgggagg	gcttaccatc	tggccccagt	gctgcaatga	taccgcgaga	3180
cccacgctca	ccggctccag	atztatcagc	aataaaccag	ccagccggga	gggcccagcg	3240
cagaagtggg	cctgcaactt	tatccgcctc	catccagttc	attaattggt	gccggggaagc	3300
tagagtaagt	agttcgccag	ttaatagttt	gcgcaacggt	gttgccattg	ctgcaggcat	3360
cggtggtgtc	cgctcgctgt	ttggtatggc	ttcattcagc	tcgggttccc	aacgatcaag	3420
gcgagttaca	tgatccccca	tgttgtgcaa	aaaagcgggt	agctccttcg	gtcctccgat	3480
cgttgtcaga	agtaagttgg	ccgcagtggt	atcactcatg	gttatggcag	cactgcataa	3540
ttctcttact	gtcatgccat	ccgtaagatg	cttttctgtg	actggtgagt	actcaaccaa	3600
gtcattctga	gaatagtgtg	tgcggcgacc	gagttgctct	tgcggcgctg	caacacggga	3660
taataccgcg	ccacatagca	gaactttaaa	agtgtctatc	attggaaaac	gttcttcggg	3720
gcgaaaactc	tcaaggatct	taccgctgtt	gagatccagt	tcgatgtaac	ccactcgtgc	3780
acccaactga	tcttcagcat	cttttacttt	caccagcggt	tctgggtgag	caaaaacagg	3840
aaggcaaaat	gccgcaaaaa	agggaataag	ggcgacacgg	aaatggtgaa	tactcatact	3900
cttccttttt	caatattatt	gaagcattta	tcagggttat	tgtctcatga	gcggatacat	3960
atttgaatgt	atttagaaaa	ataaaacaat	aggggttccg	cgcacatttc	cccgaagaat	4020
gccacctgac	gtctaagaaa	ccattattat	catgacatta	acctataaaa	ataggcggtat	4080
cacgaggccc	tttctgtctc	aagaattctc	atgtttgaca	gcttatcatc	gataagcttt	4140
aatgcggtag	tttatccacg	ttaaattgct	aacgcagtcg	ggcaccgtgt	atgaaatcta	4200
acaatgcgct	cattgctcat	ctcggcacgg	tcaccttgga	tgtgttaggc	ataggcttgc	4260
ttatgccggt	actgcccggc	ctcttgccgg	atatcgtcca	ttccgacagc	atcgccagtc	4320
actatggcgt	gctgctagcg	ctatatgcgt	tgatgcaatt	tctatgcgca	cccgttctcg	4380
gagcactgtc	cgaccgcttt	ggccgccgcc	cagtcctgct	cgcttcgcta	cttgagacca	4440
ctatcgacta	cgcgatcatg	gcgaccacac	ccgtcctgtg	gatcccagac	gagttaagtc	4500
accatacggt	agtacagggt	gccactcttt	tggcagacgc	agacctacgg	ctacaatagc	4560
gaagcgggtc	tgggtattcat	gtttaaaaat	actgtcgcga	tagccaaaaac	ggcactcttt	4620

ggcagttaag	cgcacttgct	tgccctgtcgc	cagttcaaca	gaatcaacat	aagcgcaaac	4680
tcgctgtaat	tctacgccat	aagcaccaat	attctggata	ggtgatgagc	cgacacaacc	4740
aggaattaat	gccagatttt	ccagaccagg	cataccttcc	tgcaaagtgt	attttaccag	4800
acgatgccag	ttttctccgg	ctcctacatg	taaataccac	gcatcagggt	catcatgaat	4860
ttcgatacct	ttgatccggt	tgatgatcac	cgtgccgcga	tagtcctcca	gaaaaagtac	4920
attacttcct	tcacccagaa	taagaacggg	ttgtccttct	gcggttgcat	actgccaggc	4980
attgagtaat	tgttgttcgt	cttcgggcaca	tacaatgtgc	tgagcattat	gatcaatgcc	5040
aaatgtgttc	cagggtttta	aggagtgggt	catagctgct	ttcctgatgc	aaaaacgagg	5100
ctagtttacc	gtatctgtgg	ggggatggct	tgtagatatg	acgacaggaa	gagtttgtag	5160
aaacgcaaaa	aggccatccg	tcaggatggc	cttctgctta	atltgatgcc	tggcagttta	5220
tggcgggcgt	cctgcccgcg	accctccggg	ccgttgcttc	gcaacgttca	aatccgctcc	5280
cggcgggattt	gtcctactca	ggagagcggt	caccgacaaa	caacagataa	aacgaaaggc	5340
ccagtctttc	gactgagcct	ttcgttttat	ttgatgcctg	gcagttccct	actctcgcat	5400
ggggagaccc	cacactacca	tcggcgctac	ggcgtttcac	ttctgagttc	ggcatggggg	5460
caggtggggac	caccgcgcta	ctgccgccag	gcaaattctg	ttttatcaga	ccgcttctgc	5520
gttctgattt	aatctgtatc	aggctgaaaa	tcttctctca	tccgccaaaa	cagcttcggc	5580
gttgtaagg	taagcctcac	ggttcattag	taccggttag	ctcaacgcat	cgctgcgctt	5640
acacacccgg	cctatcaacg	tcgtcgtctt	caacgttcc	tcaggaccct	taaagggcca	5700
gggagaactc	atctcggggc	aagtttcgtg	cttagatgct	ttcagcactt	atctcttccg	5760
ccatttagcta	ccgggcagtg	ccattggcat	gacaaccgga	acaccagtga	tgcttccact	5820
ccggtcctct	cgtactagga	gcagccccc	tcagttctcc	agcgcccacg	gcagataggg	5880
accgaactgt	ctcacgacgt	tctaaaccca	gctcgcgtac	cactttaaat	ggcgaacagc	5940
catacccttg	ggacctactt	cagccccagg	atgtgatgag	ccgacatcga	ggtgccaaac	6000
accgccgtcg	atatgaactc	ttggcgcgta	tcagcctggt	atccccggag	taccttttat	6060
ccgttgagcg	atggcccttc	cattcagaac	caccggatca	ctatgacctg	ctttcgcacc	6120
tgctcgcgcc	gtcacgctcg	cagtcaagct	ggcttatgcc	attgcactaa	cctcctgatg	6180
tccgaccagg	attagccaac	cttcgtgctc	ctccgttact	ctttaggagg	agaccgcccc	6240
agtcaaacta	cccaccagac	actgtccgca	acccggatta	cgggtcaacg	ttagaacatc	6300
aaacattaaa	gggtgggtatt	tcaaggctcg	ctccatgcag	actggcgctc	acacttcaaa	6360
gcctcccacc	tatcctacac	atcaaggctc	aatggttcagt	gtcaagctat	agtaaagggt	6420
cacgggggtct	ttccgtcttg	ccgcggttac	actgcactct	cacagcgagt	tcaatttcac	6480
tgagtctcgg	gtggagacag	cctggccatc	attacgccat	tcgtgcaggt	cggaacttac	6540
ccgacaagga	atttcgctac	cttaggaccg	ttatagttac	ggccgccggt	taccgggggt	6600
tcgatcaaga	gcttcgcttg	cgctaaccce	atcaattaac	cttccggcac	cgggcaggcg	6660
tcacaccgta	tacgtccact	ttcgtgtttg	cacagtgtcg	tgtttttaat	aaacagttgc	6720
agccagctgg	tatcttcgac	tgatttcage	tccatccgcg	agggacctca	cctacatatc	6780
agcgtgcctt	ctcccgaagt	tacggcacca	ttttgcctag	ttccttcacc	cgagtctctc	6840
caagcgcctt	ggtattctct	acctgaccac	ctgtgtcggt	ttgggggtacg	atttgatgtt	6900
acctgatgct	tagaggcttt	tcctggaagc	agggcatttg	ttgcttcagc	accgtagtgc	6960
ctcgtcatca	cgcctcagcc	ttgattttcc	ggattttgct	ggaaaaccag	cctacacgct	7020
taaaccggga	caaccgtcgc	ccggccaaca	tagccttctc	cgtccccctc	tcgcagtaac	7080
accaagtaca	ggaatatata	cctgtttccc	atcgactacg	cctttcggcc	tcgccttagg	7140
ggtcgactca	ccctgccccg	attaacgttg	gacaggaacc	cttgggtctt	cggcgagcgg	7200
gcttttcacc	cgctttatcg	ttacttatgt	cagcattcgc	acttctgata	cctccagcat	7260
gcctcacagc	acaccttcgc	aggcttacag	aacgctcccc	tacccaacaa	cgcataagcg	7320
tcgctgccgc	agcttcgggtg	catgggttag	ccccgttaca	tcttccgcgc	agggcgactc	7380
gaccagtgag	ctattacgct	ttcttttaaa	gatggctgct	tctaagccaa	catcctgggt	7440
gtctggggct	tcccacatcg	tttcccactt	aaccatgact	ttgggacctt	agctggcggt	7500
ctgggttggt	tccctcttca	cgacggacgt	tagcaccgcg	cgtgtgtctc	ccgtgataac	7560
attctccggg	attcgcagtt	tgcatcgggt	tggttaagtcg	ggatgacccc	cttgccgaaa	7620
cagtgtctta	cccccgagga	tgaattcacg	aggcgctacc	taaatagctt	tcggggagaa	7680
ccagctatct	cccggtttga	ttggcctttc	acccccagcc	acaagtcatc	cgctaatttt	7740
tcaacattag	tcggttcggg	cctccagtta	gtgttaccca	accttcaacc	tgccccatggc	7800
tagatcaccc	ggtttcgggt	ctataccctg	caacttaacg	cccagttaag	actcggtttc	7860
ccttcggctc	ccctattcgg	ttaaccttgc	tacagaatat	aagtcgctga	cccattatata	7920
aaaagggtacg	cagtcacacg	cctaagcgtg	ctcccactgc	ttgtacgtac	acggttttcag	7980
gttctttttc	actcccctcg	ccgggggttct	tttcgccttt	ccctcacggg	actggttcac	8040
tatcgggtcag	tcaggagtat	ttagccttgg	aggatgggtcc	ccccatattc	agacaggata	8100
ccacgtgtcc	cgccctactc	atcgagctca	cagcatgtgc	atltttgtgt	acggggctgt	8160
caccctgtat	cgcgcgcctt	tccagacgct	tccactaaca	cacacactga	ttcaggctct	8220
gggctgctcc	ccgttcgctc	gccgctactg	ggggaatctc	ggttgatattc	tttccctcgg	8280

```

ggtacttaga tgtttcagtt cccccggttc gcttcattaa cctatggatt cagttaatga 8340
tagtgtgtcg aaacacactg ggtttcccca ttcggaatc gccggttata acggttcata 8400
tcaccttacc gacgcttata gcagattagc acgtccttca tcgcctctga ctgccagggc 8460
atccaccgtg tacgcttagt cgcttaacct cacaacccga agatgtttct ttcgattcat 8520
catcgtgttg cgaaaatttg agagactcac gaacaactct cgttggttcag tgtttcaatt 8580
ttcagcttga tccagatttt taaagagcaa aaatctcaaa catcacccga agatgagttt 8640
tgagatatta aggtcggcga ctttactca caaaccagca agtggcgctc cctaggggat 8700
tcgaacccct gttaccgctg tgaaagggcg gtgtcctggg cctctagacg aaggggacac 8760
gaaaattgct tatcacgcgt tgcgtgatat ttctgtgtag ggtgagcttt cattaataga 8820
aagcgaacgg ccttattctc ttcagcctca ctcccaacgc gtaaagcctt tgcttttcac 8880
tttctatcag acaatctgtg tgagcactac aaagtacgct tctttaaggt aatcccatga 8940
tccaaccgca gggtccctta cggttacctt gttacgactt caccocagtc atgaatcaca 9000
aagtggtaag cgccctcccg aaggttaaag tacctacttc ttttgcaacc cactcccatg 9060
gtgtgacggg cgggtgtgtac aaggcccggg aacgtattca ccgtggcatt ctgatccacg 9120
attactagcg attccgactt catggagtcg agttgcagac tccaatccgg actacgacgc 9180
actttatgag gtccgcttgc tctcgcgagg tegettctct ttgtatgctc cattgtagca 9240
cgtgtgtagc cctggtccta agggccatga tgacttgacg tcatcccccac cttcctccag 9300
tttatcactg gcagtctcct ttgagttccc ggccggaccg ctggcaacaa aggataaggg 9360
ttgcgctcgt tgcgggactt aacccaacat ttcaacaac gagctgacga cagccatgca 9420
gcacctgtct cagcgttccc gaaggcacat tctcatctct gaaaacttcc gtggatgtca 9480
agaccaggta aggttcttctg cgttgcatcg aattaaacca catgctccac cgcttgctgcg 9540
ggcccccgct aattcatttg agttttaacc ttgcggccgt actccccagg cggtcgactt 9600
aacgcgttag ctccggaagc cagcctcaa gggcacaacc tccaagtcga catcgtttac 9660
ggcgtggact accagggtat ctaatcctgt ttgctcccca cgctttcgca cctgagcgtc 9720
agtcttcgtc cagggggcgg ccttcgccac cggtatctct ccagatctct acgcatttca 9780
ccgtacacac tgggaattcta cccccctcta cgagactcaa gcttgccagt atcagatgca 9840
gttcccagggt tgagcccggt gatttcacat ctgacttaac aaaccgctg cgtgcgcttt 9900
acgcccagta attccgatta acgcttgac cctccgtatt accgcggctg ctggcacgga 9960
gttgacgggt gcttcttctg cgggtaacgt caatgagcaa aggtattaac tttactccct 10020
tctccccgc tgaaagtact ttacaaccgg aaggccttct tcatacacgc ggcatggctg 10080
catcaggctt gcgcccattg tgcaatatte cccactgctg cctcccgtag gagtctggac 10140
cgtgtctcag ttccagtgtg gctggctcct ctctcagacc agctagggat cgtcgcctag 10200
gtgagccgtt accccaccta ctagctaate ccatctgggc acatccgatg gcaagaggcc 10260
cgaaggctcc cctctttggt cttgcgacgt tatgcgggat tagctaccgt ttccagtagt 10320
tataccccct catcaggcag tttcccagac attactcacc cgtccgccac tcgtcagcaa 10380
agaagcaagc ttcttcctgt taccgttcca cttgcagtgt ttaggcctgc cgccagcgtt 10440
caatctgagc catgatcaaa ctcttcaatt taaaagtttg acgctcaaag aattaaactt 10500
cgtaatgaat tacgtgttca ctcttgagac ttggtattca tttttcgtct tgcgacgtta 10560
agaatccgta tcttcgagtg cccacacaga ttgtctgata aattgttaaa gagcagtgc 10620
gcttcgcttt ttctcagcgg ccgctgtgtg aaattgttat ccgctcacia ttccacacat 10680
tatacgagcc ggaagcataa agtgtaaagc ctgggggtgc taatgagtga gctaactcac 10740
attaattgct ttgcgctcac tgcccgttt ccagtcggga aacctgtcgt gccagctgca 10800
ttaatgaatc ggccaacgcg cggggagagg cggtttgctg attgggcgcc aggggtggtt 10860
ttcttttcac cagtgcagc ggcaacagct gattgcctt caccgcctgg cctgagaga 10920
gttgacgcaa gcggtccacg ctggtttgct ccagcaggcg aaaatcctgt ttgatggtg 10980
ttgacggcgg gatataacat gagctgtctt cggtatcgtc gtatccact accgagatat 11040
ccgcaccaac gcgcagcccg gactcggtaa tggcgcgcat tgcgcccagc gccatctgat 11100
cgttggaac cagcatcgca gtgggaacga tgccctcatt cagcatttgc atggtttgtt 11160
gaaaaccgga catggcactc cagtcgcctt cccgttccgc tatcggctga atttgattgc 11220
gagtgcagata tttatgccag ccagccagac gcagacgcgc cgagacagaa cttaatgggc 11280
ccgctaacag cgcgatttgc tggtagacca atgcgaccag atgctccacg cccagtcgcg 11340
taccgtcttc atgggagaaa ataatactgt tgatgggtgt ctggtcagag acatcaagaa 11400
ataacgccgg aacattagt gaggcagctt ccacagcaat ggcatcctg tcacccagcg 11460
gatagttaat gatcagccca ctgaccctt gcgcgagaag attgtgcacc gccgctttac 11520
aggcttcgac gccgcttctg tctaccatcg acaccacac gctggcacc agttgatcgg 11580
cggcagattt aatcgccgag acaatttgcg acggcgcgtg cagggccaga ctggaggtg 11640
caacgccaat cagcaacgac tgtttgcccg ccagttgttg tgccacgcgg ttgggaatgt 11700
aattcagctc cgccatcgcc gcttccactt tttcccgct tttcgcagaa acgtggctg 11760
cctggttcac cagcgggaa acggtctgat aagagacacc ggcatactct gcgacatcgt 11820
ataacggtac tggtttcaca ttcaccacc tgaattgact ctcttccggg cgctatcatg 11880

```

ccataccgcg aaaggttttg caccattcga tgggtgtcg

11918

<210> 3

<211> 13278

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 3

```

aaattgaaga gtttgatcat ggctcagatt gaacgctggc ggcaggccta acacatgcaa 60
gtcgaacggt aacaggaaga agcttgcttc tttgctgacg agtggcggac ggggtgagtaa 120
tgtctgggaa actgcctgat ggagggggat aactactgga aacggtagct aataccgcat 180
aacgtcgcaa gaccaaagag ggggaccttc gggcctcttg ccatcggatg tgcccagatg 240
ggattagcta gtaggtgggg taacggctca cctaggcgac gatccctagc tggctctgaga 300
ggatgaccag ccacactgga actgagacac ggtccagact cctacgggag gcagcagtgg 360
ggaatattgc acaatgggag caagcctgat gcagccatgc cgcgtgtatg aagaaggcct 420
tcgggttgta aagtactttc agcggggagg aaggggagtaa agttaatacc tttgctcatt 480
gacgttaccg gcagaagaag caccggctaa ctccgtgcca gcagccgagg taatacggag 540
ggtgcaagcg ttaatcgga ttactgggag taaagcgac gcaggcgggt tgttaagtca 600
gatgtgaaat ccccgggctc aacctgggaa ctgcatctga tactggcaag cttgagtctc 660
gtagaggggg gtagaattcc aggtgtagcg gtgaaatgag tagagatctg gaggaatacc 720
ggtggcgaa ggcggccccc ggacgaagac tgacgctcag gtgcgaaagc gtggggagca 780
aacaggatta gataccctgg tagtccacgc cgtaaagcat gtcgacttgg aggttgtgcc 840
cttgaggcgt ggcttccgga gctaacgcgt taagtcgacc gcctggggag tacggccgca 900
agggttaaac tcgaatgaat tgacgggggc ccgcacaagc ggtggagcat gtggtttaat 960
tcgatgcaac gcgaagaacc ttacctgggtc ttgacatcca cggaagtgtt cagagatgag 1020
aatgtgcctt cgggaaccgt gagacagggt ctgcatgggt gtcgtcagct cgtgttgtga 1080
aatgttgggt taagtccgc aacgagcgca acccttatcc tttgttgcca gcggtccggc 1140
cgggaactca aaggagactg ccagtataaa actggaggaa ggtggggatg acgtcaagtc 1200
atcatggccc ttacgaccag ggctacacac gtgctacaat ggcgcataca aagagaagcg 1260
acctcgcgag agcaagcgga cctcataaag tgcgtcgtag tccggattgg agtctgcaac 1320
tcgactccat gaagtcgga tcgctagtaa tcgtggatca gaatgccacg gtgaatacgt 1380
tcccgggccc tgtacacacc gcccgtcaca ccatgggagt ggggtgcaa agaagtaggt 1440
agcttaacct tcgggagggc gcttaccact ttgtgattca tgactggggt gaagtcgtaa 1500
caaggtaacc gtaggggaac ctgcggttgg atcatgggat taccttaaag aagcgtactt 1560
tgtagtgtct acacagattg tctgatagaa agtgaaaagc aaggcgttta cgcgttggga 1620
gtgaggctga agagaataag gccgttcgct ttctattaat gaaagctcac cctacacgaa 1680
aatatcacgc aacgcgtgat aagcaatttt cgtgtccctc tcgtctagag gccaggaca 1740
ccgccctttc acggcggtaa caggggttcg aatcccttag gggacgccac ttgctggttt 1800
gtgagtgaat gtcgccgacc ttaatatctc aaaactcacc ttcgggtgat gtttgagatt 1860
tttgctcttt aaaaatctgg atcaagctga aaattgaaac actgaacaac gagagttgtt 1920
cgtgagtctc tcaaatcttc gcaacacgat gatgaatcga aagaaacatc ttcgggttgt 1980
gaggttaaac gactaagcgt acacgggtga tgccctggca gtcagaggcg atgaaggacg 2040
tgctaattct cgataagcgt cggtaagggt atatgaaccg ttataaccgg cgatttccga 2100
atggggaaac ccagtgtgtt tcgacacact atcattaact gaatccatag gttaatgagg 2160
cgaaccgggg gaactgaaac atctaagtac cccaggaaa agaaatcaac cgagattccc 2220
ccagtacggg cgagcgaacg gggagcagcc cagagcctga atcagtgtgt gtgttagtgg 2280
aagcgtctgg aaaggcgcg gatacagggt gacagccccg tacacaaaaa tgcacatgct 2340
gtgagctcga tgagtagggc gggacacgtg gtatcctgtc tgaatatggg gggaccatcc 2400
tccaaggcta aatactctg actgaccgat agtgaaccag taccgtgagg gaaaggcgaa 2460
aagaaccccg gcgaggggag tgaaaaagaa cctgaaaccg tgtacgtaca agcagtggga 2520
gcacgcttag gccgtgtgact gcgtaccttt tgtataatgg gtcagcgact tataattctg 2580
agcaaggtta accgaatagg ggagccgaag ggaaccgag tcttaactgg gcgttaagtt 2640
gcagggtata gaccgaaac ccggtgatct agccatgggc aggttgaagg ttgggttaaca 2700
ctaactggag gaccgaaccg actaatgttg aaaaattagc ggatgacttg tggctggggg 2760
tgaaaggcca atcaaacgg gagatagctg gttctccccg aaagctattt aggtagcgcc 2820
tcgtgaattc atctccgggg gtagagcact gtttcggcaa gggggtcac ccgacttacc 2880

```


aacccgatgc	aaactgcgaa	taccggagaa	tgttatcacg	ggagacacac	ggcgggtgct	2940
aacgtccgct	gtgaagaggg	aaacaaccca	gaccgccagc	taaggtccca	aagtcatggt	3000
taagtgggaa	acgatgtggg	aaggcccgag	cagccaggat	gttggcttag	aagcagccat	3060
catttaaaga	aagcgtaata	gctcactggt	cgagtcggcc	tgcgcggaag	atgtaacggg	3120
gctaaacat	gcaccgaagc	tgccgagcgc	acgcttatgc	gttggtgggt	aggggagcgt	3180
tctgtaagcc	tgcgaaagtg	tgctgtgagg	catgctggag	gtatcagaag	tgcgaaatgct	3240
gacataagta	acgataaagc	gggtgaaaag	cccgcctgcc	ggaagaccaa	gggttcctgt	3300
ccaacgttaa	tcggggcgag	gtgagtcgac	ccctaaggcg	aggccgaaaag	gcgtagtcga	3360
tgggaaacag	gttaatatct	ctgtacttgg	tgttactgcg	aaggggggac	ggagaaggct	3420
atgttggccg	ggcgacgggt	gtcccgggtt	aagcgtgtag	gctgggtttc	caggcaaate	3480
cggaaaatca	aggctgaggg	gtgatgacga	ggcactacgg	tgctgaagca	acaaatgccc	3540
tcgttccagg	aaaagcctct	aagcatcagg	taacatcaaa	tcgtacccca	aaccgacaca	3600
gggtggtcagg	tagagaatac	caaggcgctt	gagagaactc	gggtgaagga	actaggcaaa	3660
atggtgccgt	aacttcggga	gaaggcacgc	tgatatgtag	gtgaggtccc	tcgcggatgg	3720
agctgaaatc	agtcgaagat	accagctggc	tgcaactggt	tattaaaaac	acagcactgt	3780
gcaaacacga	aagtggacgt	atacgggtgt	acgcctgccc	ggtgccggaa	ggttaattga	3840
tggtggttagc	gcaagcgaa	ctcttgatcg	aagccccggt	aaacggcggc	cgtaactata	3900
acggtcctaa	ggtagcgaaa	ttccttgctc	ggtaagttcc	gacctgcacg	aatggcgtaa	3960
tgatggccag	gctgtctcca	cccagactc	agtgaattg	aactcgctgt	gaagatgcag	4020
tgtaccgcg	gcaagacgga	aagacccggt	gaacctttac	tatagcttga	caactgaacat	4080
tgagccttga	tgtgtaggat	aggtgggagg	ctttgaagtg	tggacgccag	tctgcatgga	4140
gccgaccttg	aaataccacc	ctttaatggt	tgatgttcta	acgttgaccc	gtaatccggg	4200
ttgcggacag	tgtctggtgg	gtagtttgac	tggtggcggtc	tcctcctaaa	gagtaacgga	4260
ggagcacgaa	ggttggtctaa	tcctggctcg	acatcaggag	gttagtgcaa	tggcataagc	4320
cagcttgact	gcgagcgtga	cggcgcgagc	aggtgcgaaa	gcaggtcata	gtgatccggt	4380
ggttctgaat	ggaagggcca	tcgctcaacg	gataaaaggt	actccgggga	taacaggctg	4440
ataccgcccc	agagttcata	tcgacggcgg	tgtttgccac	ctcgatgtcg	gctcatcaca	4500
tcctgggggt	gaagtaggtc	ccaaggggat	ggctgttcgc	catttaaagt	ggtacgcgag	4560
ctgggtttag	aagctcgtga	gacagttcgg	tccttatctg	ccgtgggcgc	tggaagactg	4620
aggggggctg	ctcctagtac	gagaggacgc	gagtgagcgc	atcactgggt	ttcgggttgt	4680
catgccaatg	gcactgcccg	gtagctaaat	gcggaagaga	taagtgtctga	aagcatctaa	4740
gcacgaaact	tgccccgaga	tgagttctcc	ctgacctttt	aagggtcctg	aaggaacggt	4800
gaagacgacg	acgttgatag	gccgggtgtg	taagcgcagc	gatgcgttga	gctaaccggt	4860
actaatgaac	cgtgaggctt	aaccttacaa	cgccgaagct	gttttgccgg	atgagagaag	4920
attttcagcc	tgatacagat	taaatcagaa	cgcagaagcg	gtctgataaa	acagaatttg	4980
cctggcgcca	gtagcgcggt	ggtcccacct	gaccccatgc	cgaactcaga	agtgaacgc	5040
cgtagcgccg	atggtagtgt	gggtctctcc	catgcgagag	taggggaactg	ccaggcatca	5100
aataaaacga	aaggctcagt	cgaagactcg	ggcctttcgt	tttatctggt	gtttgtcggg	5160
gaacgctctc	ctgagtagga	caaatccgcc	gggagcggt	ttgaacggtg	cgaagcaacg	5220
gcccggaggg	tgccgggag	gacgcccgc	ataaactgcc	aggcatcaaa	ttaagcagaa	5280
ggccatcctg	acggatggcc	tttttgctt	tctacaaact	cttcctgtcg	tcatactctac	5340
aagccatccc	cccacagata	cggtaaacta	gcctcggttt	tgcatcagga	aagcagctat	5400
gaaccactcc	ttaaaaccct	ggaacacatt	tggtattgat	cataatgctc	agcacattgt	5460
atgggcctta	agggcccaac	aattactcaa	tgcttgccag	tatgcaaccg	cagaaggaca	5520
acccgttctt	attctgggtg	aaggaagtaa	tgtacttttt	ctggaggact	atcgccggcac	5580
ggtgatcatc	aaccgatca	aaggtatcga	aattcatgat	gaacctgatg	cgtggtattt	5640
acatgttaga	cccggagaaa	actggcatcg	tctggtaaaa	tacacttttg	aggaaggat	5700
gcctggtctg	gaaaatctgg	cattaattcc	tggttggtgc	ggctcatcac	ctatccagaa	5760
tattggtgct	tatggcgtag	aattacagcg	agtttgcgct	tatgttgatt	ctgttgaact	5820
ggcgacaggc	aagcaagtgc	gcttaactgc	caaagagtgc	cgttttggct	atcgcgacag	5880
tatttttaaa	catgaatacc	aggaccgctt	cgctattgta	gccgtagggtc	tgctctgcc	5940
aaaagagtgg	caacctgtac	taacgtatgg	tgacttaact	cgtctgggat	ccacaggacg	6000
ggtgtggtcg	ccatgatcgc	gtagtcgata	gtggctccaa	gtagcgaagc	gagcaggact	6060
ggcgggcggc	caaagcggtc	ggacagtgtc	ccgagaacgg	gtgcgcatag	aaattgcatc	6120
aacgcataata	gcgctagcag	cacgccatag	tgactggcga	tgctgtcgga	atggacgata	6180
tcggcgaaga	ggcccggcag	taccggcata	accaagccta	tgccctacagc	atccagggtg	6240
acggtgccga	ggatgacgat	gagcgcattg	ttagatttca	tacacgggtgc	ctgactgcgt	6300
tagcaattta	actgtgataa	actaccgcat	taaagcttat	cgatgataag	ctgtcaaaca	6360
tgagaattct	tgaagacgaa	agggcctcgt	gatacgcccta	tttttatagg	ttaatgtcat	6420
gataataatg	gtttcttaga	cgtcaggtgg	cacttttcgg	ggaaatgtgc	gcggaacccc	6480
tatttggtta	tttttctaaa	tacattcaaa	tatgtatccg	ctcatgagac	aataaccctg	6540

ataaatgctt	caataatatt	gaaaaaggaa	gagtatgagt	attcaacatt	tccgtgtcgc	6600
ccttattccc	ttttttgcgg	cattttgcct	tccgtgtttt	gctcaccag	aaacgctggg	6660
gaaagtaaaa	gatgctgaag	atcagttggg	tgcacgagtg	ggttacatcg	aactggatct	6720
caacagcggt	aagatccttg	agagttttcg	ccccgaagaa	cgttttccaa	tgatgagcac	6780
ttttaaagtt	ctgctatgtg	gcgcggtatt	atcccggtgt	gacgccgggc	aagagcaact	6840
cggtcgccgc	atacactatt	ctcagaatga	cttgggttgag	tactcaccag	tcacagaaaa	6900
gcatcttacg	gatggcatga	cagtaagaga	attatgcagt	gctgccataa	ccatgagtga	6960
taacactgcg	gccaacttac	ttctgacaac	gatcggagga	ccgaaggagc	taaccgcttt	7020
tttgacacaac	atggggggtc	atgtaactcg	ccttgatcgt	tgggaaccgg	agctgaatga	7080
agccatacca	aacgacgagc	gtgacaccac	gatgcctgca	gcaatggcaa	caacgttgcg	7140
caaactatta	actggcgcaac	tacttactct	agctttcccg	caacaattaa	tagactggat	7200
ggaggcggtat	aaagttgcag	gaccacttct	gcgctcgccc	cttcgggctg	gctgggttat	7260
tgctgataaa	tctggagccg	gtgagcgtgg	gtctcgcggt	atcattgcag	cactggggcc	7320
agatggtaag	ccctcccgta	tcgtagtatt	ctacacgacg	gggagtcagg	caactatgga	7380
tgaacgaaat	agacagatcg	ctgagatagg	tgcctcactg	attaagcatt	ggtaactgtc	7440
agaccaagtt	tactcatata	tacttttagat	tgatttaaaa	cttcattttt	aatttaaaag	7500
gatctaggtg	aagatccttt	ttgataatct	catgaccaa	atcccttaac	gtgagttttc	7560
gttccactga	gcgtcagacc	ccgtagaaaa	gatcaaagga	tcttcttgag	atcctttttt	7620
tctgcgcgta	atctgctgct	tgcaaacaaa	aaaaccaccg	ctaccagcgg	tggtttggtt	7680
gccggatcaa	gagctaccaa	ctctttttcc	gaaggtaact	ggcttcagca	gagcgcagat	7740
accaaatact	gtccttctag	tgtagccgta	gttagccac	cacttcaaga	actctgtagc	7800
accgcctaca	tacctcgctc	tgctaatact	gttaccagtg	gctgctgcca	gtggcgataa	7860
gtcgtgtctt	accgggttg	actcaagacg	atagttaccg	gataaggcgc	agcggtcggg	7920
ctgaacgggg	ggttcgtgca	cacagcccag	cttggagcga	acgacctaca	ccgaactgag	7980
atacctacag	cgtgagctat	gagaaagcgc	cacgcttccc	gaagggagaa	aggcggacag	8040
gtatccggta	agcggcaggg	tcggaacagg	agagcgcacg	agggagcttc	cagggggaaa	8100
cgcttggtat	ctttatagtc	ctgtcgggtt	tcgccacctc	tgacttgagc	gtcgattttt	8160
gtgatgctcg	tcaggggggc	ggagcctatg	gaaaaacgcc	agcaacgcgg	ccttttttacg	8220
gttcttgccc	ttttgtctgg	cttttgctca	catgttcttt	cctgcgttat	cccctgatcc	8280
tgtggataac	cgtattaccg	cctttgagtg	agctgatacc	gctcgccgca	gccgaacgac	8340
cgagcgcagc	gagtcagtga	gcgaggaagc	ggaagagcgc	ctgatgcggt	attttctcct	8400
tacgcatctg	tgcgggtattt	cacaccgcat	atgggtgact	ctcagtacaa	tctgctctga	8460
tgccgcatag	ttaagccagt	atacactccg	ctatcgctac	gtgactgggt	catggctgcg	8520
ccccgacacc	cgccaacacc	cgctgacgcg	ccctgacggg	cttgtctgct	cccggcatcc	8580
gcttacagac	aagctgtgac	cgtctccggg	agctgcatgt	gtcagagggt	ttcaccgtca	8640
tcaccgaaac	gcgcgaggca	gctgcggtaa	agctcatcag	cgtggctcgtg	aagcgattca	8700
catagtcttg	cctgttcatc	cgcgtccagc	tcgttgagtt	tctccagaag	cgttaatgtc	8760
tggcttctga	taaagcgggc	catgttaagg	gcggtttttt	cctgtttggt	cacttgatgc	8820
ctccgtgtaa	gggggaattt	ctgttcatgg	ggtgaatgat	accgatgaaa	cgagagagga	8880
tgctcacgat	acgggttact	gatgatgaac	atgcccggtt	actggaacgt	tgtgagggta	8940
aacaactggc	ggtatggatg	cggcgggacc	agagaaaaat	cactcagggt	caatgccagc	9000
gcttcggtta	tacagatgta	ggtgttccac	agggtagcca	gcagcatcct	gcgatgcctg	9060
gcgaaagggg	gatgtgctgc	aaggcgatta	agttgggtaa	cgccagggtt	ttcccagtc	9120
cgacgttgta	aaacgacggc	cagtgaattc	gagctcggta	cctgcactga	cgacaggaag	9180
agtttgtaga	aacgcaaaaa	ggccatccgt	caggatggcc	ttctgcttaa	tttgatgcct	9240
ggcagtttat	ggcgggctgc	ctgcccgcca	ccctccgggc	cgttgcttcg	caacgttcaa	9300
atccgctccc	ggcggtattg	tcctactcag	gagagcgttc	accgacaaac	aacagataaa	9360
acgaaaggcc	cagtcttttcg	actgagcctt	tcgtttttat	tgatgcctgg	cagttcccta	9420
ctctcgcatg	gggagacccc	acactaccat	cggcgctacg	actagattat	ttgtagagct	9480
catccatgcc	atgtgtaatc	ccagcagcag	ttacaaactc	aagaaggacc	atgtgggtcac	9540
gcttttcggt	gggatctttc	gaaagggcag	attgtgtcga	caggtaatgg	ttgtctggta	9600
aaaggacagg	gccatcgcca	attggagtat	tttggttgata	atggctctgct	agttgaacgg	9660
atccatcttc	aatgttggtg	cgaattttga	agtttagctt	gattccattc	ttttgtttgt	9720
ctgccgtgat	gtatacattg	tgtgagttat	agttgtactc	gagtttggtg	ccgagaatgt	9780
ttccatcttc	tttaaaatca	atacctttta	actcgatacg	attaacaagg	gtatcacctt	9840
caaacttgac	ttcagcacgg	gtcttgtagt	tcccgctcat	tttgaaagat	atagtgcgtt	9900
cctgtacata	accttcgggc	atggcactct	tgaaaagatc	atgccgtttc	atatgatccg	9960
gataacggga	aaagcattga	acaccataag	agaaagtagt	gacaagtggt	ggccatggaa	10020
caggtagttt	tccagtagtg	caaataaatt	taagggttaag	ctttccgtat	gtagcatcac	10080
cttcaccctc	tccactgaca	gaaaatttgt	gcccattaac	atcaccatct	aattcaacaa	10140
gaattgggac	aactccagtg	aaaagttctt	ctcctttgct	cgcagtgatt	tttttctcca	10200

```

tttgcggagg gatatgaaag cggccgcttc cacacattaa actagttcga tgattaattg 10260
tcaacagctc gccggcgga cctcgctaac ggattcacca ctccaagaat tggagccaat 10320
cgattcttgc ggagaactgt gaatgcgggt acccagatcc ggaacataat ggtgcagggc 10380
gctgacttcc gcgtttccag actttacgaa acacggaaac cgaagaccat tcatgttggt 10440
gctcaggctc cagacgtttt gcagcagcag tcgcttcacg ttcgctcgcg tatcggtgat 10500
tcattctgct aaccagtaag gcaaccccg cagcctagcc gggctcctca cgacaggagc 10560
acgatcatgc gcacccgtgg ccaggacca acgctgcccc agatgcgccc cgtgcggctg 10620
ctggagatgg cggacgcgat ggatatgttc tgccaagggg tggtttgcg attcacagtt 10680
ctccgcaaga atcgattggc tccaattctt ggagtggtga atccgtagc gaggtgccgc 10740
cggcgagctg ttgacaatta atcatcgaac tagtttaatg tgtggaagcg gccgctttca 10800
tatccctccg caaatggaga aaaaaatcac tggatatacc accgttgata tatcccaatg 10860
gcactgtaaa gaacattttg aggcatttca gtcagttgct caatgtacct ataaccagac 10920
cgttcagctg gatattacgg ccttttttaa gaccgtaaag aaaaataagc acaagtttta 10980
tccggccttt attcacattc ttgcccgcct gatgaatgct catccggaat tccgtatggc 11040
aatgaaagac ggtgagctgg tgatatggga tagtggtcac ccttggtaca ccgttttcca 11100
tgagcaaact gaaacgtttt catcgctctg gagtgaatac cacgacgatt tccggcagtt 11160
tctacacata tattcgcaag atgtggcgtg ttacggtgaa aacctggcct atttccctaa 11220
agggtttatt gagaatatgt ttttcgtctc agccaatccc tgggtgagtt tcaccagttt 11280
tgatttaaac gtggccaata tggacaactt cttcgcccc gttttcacca tgggcaaata 11340
ttatacgcaa ggcgacaagg tgctgatgcc gctggcgatt caggttcatc atgccgtctg 11400
tgatggcttc catgtcggca gaatgcttaa tgaattacaa cagtactgcg atgagtggca 11460
ggcgggggcg taattttttt aaggcagtta ttggtgccct taaacgcctg gtgtacgcc 11520
tgaataagtg ataataagcg gatgaatggc agaaattcga aagcaaattc gaccgggtcg 11580
tcggttcagg gcagggtcgt taaatagccg cttatgtcta ttgctggttt acggtttatt 11640
gactacccga agcagtgatga ccctgtgctt ctcaaagcc tgagggcagt ttgctcaggt 11700
ctcccgctgg ggggaataat taacggtatg agccttacgg cggacggatc gtggccgcaa 11760
gtgggtccgg ctagaggatc cgacaccatc gaatggtgca aaacctttcg cggtatggca 11820
tgatagcgcc cgggaagagag tcaattcagg gtggtgaatg tgaaaccagt aacgttatac 11880
gatgtcgcag agtatgccg tgtctcttat cagaccgttt cccgcgtggg gaaccaggcc 11940
agccacgttt ctgcgaaaac gcgggaaaaa gtcgaaagcg cgatggcgga gctgaattac 12000
attccaacc gcgtggcaca acaactggcg ggcaaacagt cgttgctgat tggcgttgcc 12060
acctccagtc tggccctgca cgcgccgtcg caaattgtcg cggcgattaa atctcgcgcc 12120
gatcaactgg gtgccagcgt ggtggtgtcg atggtagaac gaagcggcgt cgaagcctgt 12180
aaagcggcgg tgcacaatct tctcgcgcaa cgggtcagtg ggctgatcat taactatccg 12240
ctggatgacc aggatgccat tgctgtggaa gctgcctgca ctaatgttcc ggcgttattt 12300
cttgatgtct ctgaccagac acctatcaac agtattattt tctcccatga agacggtagc 12360
cgactgggcg tggagcatct ggtcgcattg ggtcaccagc aaatcgcgct gttagcgggc 12420
ccattaagtt ctgtctcgcc gcgtctgctg ctggctgggt ggcataaata tctcactcgc 12480
aatcaaattc agccgatagc ggaacgggaa ggcgactgga gtgccatgtc cggttttcaa 12540
caaaccatgc aaatgctgaa tgagggcata gttccactg cgatgctggg tgccaacgat 12600
cagatggcgc tgggcgcaat gcgcgccatt accgagtcgg ggctgcgcgt tgggtcggat 12660
atctcggtag tgggatacga cgataccgaa gacagctcat gttatatccc gccgtcaacc 12720
accatcaaac aggattttcg cctgctgggg caaaccagcg cggaccgctt gctgcaactc 12780
tctcagggcc aggcggtgaa gggcaatcag ctgttgcccc tctcactggg gaaaagaaaa 12840
accacctgg cgccaatac gcaaaccgcc tctccccgcg cgttggccga ttcattaatg 12900
cagctggcac gacaggtttc ccgactggaa agcgggcagt gagcgcaacg caattaatgt 12960
gagttagctc actcattagg caccacaggc ttacacttt atgcttcggg ctcgataat 13020
gtgtggaatt gtgagcggat aacaatttca cacagcgccc gctgagaaaa agcgaagcgg 13080
cactgctctt taacaattta tcagacaatc tgtgtgggca ctcgaagata cggattctta 13140
acgtcgcaag acgaaaaatg aataccaagt ctcaagagtg aacacgtaat tcattacgaa 13200
gtttaattct ttgagcgtca aacttttaac gacggccagt gaattcgagc tcggtacctg 13260
cactgacgac aggaagag                                     13278

```

<210> 4

<211> 13227

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 4

```

aaattgaaga gtttgatcat ggctcagatt gaacgctggc ggcaggccta acacatgcaa 60
gtcgaacggt aacaggaaga agcttgcttc tttgctgacg agtggcggac gggtagagtaa 120
tgtctgggaa actgcctgat ggagggggat aactactgga aacggtagct aataccgcat 180
aacgtcgcaa gaccaaagag ggggaccttc gggcctcttg ccatcggatg tgcccagatg 240
ggattagcta gtaggtgggg taacggctca cctaggcgac gatccctagc tggctctgaga 300
ggatgaccag ccacactgga actgagacac ggtccagact cctacgggag gcagcagtgg 360
ggaatattgc acaatgggag caagcctgat gcagccatgc cgcgtgtatg aagaaggcct 420
tcgggttgta aagtactttc agcggggagg aaggagagtaa agttaatacc tttgctcatt 480
gacgttaccg gcagaagaag caccggctaa ctccgtgcca gcagccgagg taatacggag 540
ggtgcaagcg ttaatcgga ttactgggag taaagcgac gcagccggtt tgttaagtca 600
gatgtgaaat ccccgggctc aacctgggaa ctgcatctga tactggcaag cttgagtctc 660
gtagaggggg gtagaattcc aggtgtagcg gtgaaatgcg tagagatctg gaggaatacc 720
ggtggcgaa ggcggccccct ggacgaagac tgacgctcag gtgcgaaagc gtggggagca 780
aacaggatta gataccctgg tagtccacgc cgtaaaccgat gtcgacttgg aggttgtgcc 840
cttgaggcgt ggcttccgga gctaaccgct taagtcgacc gcctggggag tacggccgca 900
aggttaaaac tcaaataaat tgacgggggc ccgcacaagc ggcgaggcat gtggattaat 960
tcgatgaaac gcgaagaacc ttacctgggt ttgacatgca caggacgctg cttagatag 1020
gcgttccctt gtggcctgtg tgcaggtggg gcatggctgt cgtcagctcg tgtcgtgaga 1080
tgttgggtta agtcccgcaa cgagcgcaac ccttgtctca tgttgccagc acgtaatggt 1140
ggggactcgt gagagactgc cggggtcaac tcggaggaag gtggggatga cgtcaagtca 1200
tcatgccccct tatgtccagg gcttcacaca tgctacaatg gccggtacaa agggctgcga 1260
tgccgcgagg ttaagcgaat ccttaaaagc cgggtctcag tcggatcggg gtctgcaact 1320
cgacccccgtg aagtcggagt cgctagtaat cgcagatcag caacgctgct gtgaatacgt 1380
tcccgggcct tgtacacacc gcccgctcag tcatgaaagt cggtaacacc cgaagccagt 1440
ggcctaacc tcgggagga gctgtcgaag gtgggatcgg cgattgggac gaagtcgtaa 1500
caagtgtaac ctaggggaac ctgcggttgg atcatgggag taccttaaag aagcgtact 1560
tgtatgtctc acacagattg tctgatagaa agtgaaaagc aaggcgttta cgcgttggga 1620
gtgaggctga agagaataag gccgttcgct ttctattaat gaaagctcac cctacacgaa 1680
aatatcacgc aacgcgtgat aagcaatddd cgtgtccctc tcgtctagag gccaggaca 1740
ccgccccttc acggcggtaa caggggttcg aatcccctag gggacgccac ttgctgggtt 1800
gtgagtgaaa gtcgccgacc ttaatatctc aaaactcatc ttcgggtgat gtttgagatt 1860
tttgctcttt aaaaatctgg atcaagctga aaattgaaac actgaacaac gagagttgtt 1920
cgtgagtctc tcaaattttc gcaacacgat gatgaatcga aagaaacatc ttcgggttgt 1980
gaggttaagc gactaagcgt acacggtgga tgccctggga gtcagaggcg atgaaggacg 2040
tgtaaatctg ccgtaagggt atatgaaccg ttataaccgg cgatttccga 2100
atggggaaac ccagtgtgtt tcgacacact atcattaact gaatccatag gttaatgagg 2160
cgaaccgggg gaactgaaac atctaagtac cccgaggaaa agaaatcaac cgagattccc 2220
ccagtagcgg cgagcgaac gggagcagcc cagagcctga atcagtgtgt gtgttagtgg 2280
aagcgtctgg aaaggcgcgc gatacagggt gacagccccg tacacaaaaa tgcacatgct 2340
gtgagctcga tgagtagggt gggacacgtg gtatcctgtc tgaatatggg gggaccatcc 2400
tccaaggcta aatactcctg actgaccgat agtgaaccag taccgtgagg gaaaggcgaa 2460
aagaaccccc gcgagggggag tgaaaaagaa cctgaaaccg tgtacgtaca agcagtggga 2520
gcacgcttag gcgtgtgact gcgtaccttt tgtataatgg gtcagcgact tatattctgt 2580
agcaaggtta accgaatagg ggagccgaag tcttaactgg cgtttaagtt 2640
gcaggggtata gaccgaaac ccggtgatct agccatgggc aggttgaagg ttgggtaaca 2700
ctaactggag gaccgaaccg actaatgttg aaaaattagc ggatgacttg tggctggggg 2760
tgaaaggcca atcaaaccgg gagatagctg gttctccccg aaagctattd aggtagcgcc 2820
tcgtgaattc atctccgggg gtagagcact gtttcggcaa gggggctatc ccgacttacc 2880
aaccgatgac aaactgcgaa taccggagaa tgttatcacg ggagacacac ggcgggtgct 2940
aacgtccgtc gtgaagaggg aaacaacca gaccgccagc taagggtcca aagtcattgt 3000
taagtgggaa acgatgtggg aaggcccaga cagccaggat gttggcttag aagcagccat 3060
catttaagaa aagcgtataa gctcactggg cgagtcggcc tgcgcggaag atgtaacggg 3120
gctaaacat gcaccgaagc tgccgcagcg acgcttatgc gttgttgggt aggggagcgt 3180
tctgtaagcc tgcgaaggtg tgctgtgagg catgctggag gtatcagaag tgcgaatgct 3240
gacataagta acgataaagc ggggtgaaaag ccgctcgcgc ggaagaccaa gggttcctgt 3300
ccaacgttaa tcggggcagg gtgagtcgac ccctaaggcg aggccgaaag gcgtagtcca 3360
tgggaaacag gttaatatct ctgtacttgg tgttactgcg aaggggggac ggagaaggct 3420
atgttggccg ggcgacggtt gtcccggttt aagcgtgtag gctgggtttc caggcaaact 3480

```

cggaataatca	aggctgaggg	gtgatgacga	ggcactacgg	tgctgaagca	acaaatgccc	3540
tgcttccagg	aaaagcctct	aagcatcagg	taacatcaaa	tcgtacccca	aaccgacaca	3600
ggtggtcagg	tagagaatac	caaggcgctt	gagagaactc	gggtgaagga	actaggcaaa	3660
atggtgccgt	aacttcggga	gaaggcacgc	tgatatgtag	gtgaggtccc	tcgcggtatg	3720
agctgaaatc	agtcgaagat	accagctggc	tgcaactgtt	tattaaaaac	acagcactgt	3780
gcaaacacga	aagtggacgt	atacgggtgt	acgcctgccc	ggtgccggaa	ggttaattga	3840
tggtggttagc	gcaagcgaag	ctcttgatcg	aagccccggt	aaacggcggc	cgtaactata	3900
acggtcctaa	ggtagcgaag	ttccttgctg	ggtaagttcc	gacctgcacg	aatggcgtaa	3960
tgatggccag	gctgtctcca	cccagagactc	agtgaatttg	aactcgctgt	gaagatgcag	4020
tgtacccgag	gcaagacgga	aagaccccg	gaacctttac	tatagcttga	caactgaacat	4080
tgagccttga	tgtgtaggat	aggtgggagg	ctttgaagtg	tggacgccag	tctgcattga	4140
gccgaccttg	aaataccacc	ctttaatgtt	tgatgttcta	acgttgaccc	gtaatccggg	4200
ttgctggacag	tgtctggtgg	gtagtttgac	tggtggcggtc	tcctcctaaa	gagtaacgga	4260
ggagcacgaa	ggttggtctaa	tcctgggtcg	acatcaggag	gttagtgcaa	tggcataagc	4320
cagcttgact	gcgagcgtga	cggcgcgagc	aggtgcgaaa	gcaggtcata	gtgatccggt	4380
ggttctgaat	ggaaggccca	tcgctcaacg	gataaaagg	actccgggga	taacaggctg	4440
ataccgcccc	agagttcata	tcgacggcg	tggttggcac	ctcgatgtcg	gctcatcaca	4500
tcctgggggt	gaagtaggtc	ccaagggtat	ggctgttcgc	catttaaagt	ggtacgcgag	4560
ctgggttttag	aacgtcgtga	gacagttcgg	tccttatctg	ccgtgggcgc	tggagaactg	4620
aggggggctg	ctcctagtac	gagaggaccg	gagtggaacg	atcactggtg	ttcgggttgt	4680
catggccaatg	gcactgccc	gtagctaaat	gcggaagaga	taagtgtctga	aagcatctaa	4740
gcacgaaact	tgccccgaga	tgagttctcc	ctgacctttt	aagggtcctg	aaggaacgtt	4800
gaagacgacg	acgttgatag	gccgggtgtg	taagcgcagc	gatgcgttga	gctaaccggt	4860
actaatgaac	cgtgaggctt	aaccttacia	cgccgaagct	gttttggcgg	atgagagaag	4920
atcttcagcc	tgatacagat	taaatcagaa	cgcagaagcg	gtctgataaa	acagaatttg	4980
cctggcgcca	gtagcgcggt	ggtcccacct	gaccccatgc	cgaactcaga	agtgaacgc	5040
cgtagcgccg	atggtagtgt	gggtctctcc	catgcgagag	tagggaaactg	ccaggcatca	5100
aataaaacga	aaggctcagt	cgaagagctg	ggcctttcgt	tttatctgtt	gtttgtcgg	5160
gaacgctctc	ctgagttaga	caaataccgc	gggagcggt	tgaacggtt	cgaagcaacg	5220
gcccggagg	tggcgggcag	gacgcccgc	taaaactgcc	aggcatcaaa	ttaagcagaa	5280
ggccatcctg	acggatggcc	tttttgctgt	tctacaaaact	cttcctgtcg	tcataatctac	5340
aagccatccc	cccacagata	cggtaaacta	gcctcgtttt	tgcatacagga	aagcagctat	5400
gaaccactcc	ttaaaaccct	ggaacacatt	tggcattgat	cataatgtct	agcacattgt	5460
atgggcctta	agggcccaac	aattactcaa	tgcttgccag	tatgcaaccg	cagaaggaca	5520
accggttctt	attctgggtg	aaggaagtaa	tgtacttttt	ctggaggact	atcgcgccac	5580
ggtgatcatc	aaccggatca	aaggtatcga	aattcatgat	gaacctgatg	cgtggtattt	5640
acatgttagga	gccggagaaa	actggcatcg	tctggttaaa	tacactttgc	aggaaggat	5700
gcctggtctg	gaaaatctgg	cattaattcc	tggttgtgtc	ggctcatcac	ctatccagaa	5760
tattggtgct	tatggcgtag	aattacagcg	agtttgctgt	tatgttgatt	ctgttgaaact	5820
ggcgacaggg	aagcaagtgc	gcttaactgc	caaagagtgc	cgttttggct	atcgcgacag	5880
tattttttaa	catgaatacc	aggaccgctt	cgctattgta	gccgtaggtc	tgcgtctgcc	5940
aaaagagtgg	caacctgtac	taacgtatgg	tgacttaact	cgtctgggat	ccacaggacg	6000
ggtgtggtcg	ccatgatcgc	gtagtcgata	gtggctccaa	gtagcgaagc	gagcaggact	6060
ggcgggcggc	caaagcggtc	ggacagtgtc	ccgagaacgg	gtgcgcatag	aaattgcac	6120
aacgcataata	gcgctagcag	cacgccatag	tgactggcga	tgctgtcgga	atggacgata	6180
tcggcgaaga	ggcccgccag	taccggcata	accaagccta	tgccatcacg	atccagggtg	6240
acgggtgccga	ggatgacgat	gagcgcatgt	ttagatttca	tacacggtgc	ctgactgcgt	6300
tagcaattta	actgtgataa	actaccgcac	taaagcttat	cgatgataag	ctgtcaaaaca	6360
tgagaattct	tgaagacgaa	agggcctcgt	gatacgccta	tttttatagg	ttaatgtcat	6420
gataataatg	gtttcttaga	cgtcaggtgg	cacttttcgg	ggaaatgtgc	gcggaacccc	6480
tatttggtta	tttttctaaa	tacattcaaa	tatgtatccg	ctcatgagac	aataaccctg	6540
ataaatgctt	caataatatt	gaaaaaggaa	gagtatgagt	attcaacatt	tccgtgtcgc	6600
ccttattccc	ttttttgcgg	cattttgcct	tcctgttttt	gctcaccacg	aaacgctgg	6660
gaaagtaaaa	gatgctgaag	atcagttggg	tgacagagtg	ggttacatcg	aactggatct	6720
caacagcggt	aagatccttg	agagtttttc	ccccgaagaa	cgtttttcaa	tgatgagcac	6780
ttttaaggtt	ctgactatgt	gcgcggtatg	atcccggtgt	gacgcccggc	aagagcaact	6840
cggtcgccc	atacactatt	ctcagaatga	cttggttgag	tactcaccag	tcacagaaaa	6900
gcatcttacg	gatggcatga	cagtaagaga	attatgcagt	gctgccataa	ccatgagtga	6960
taacactgcg	gccaacttac	ttctgacaac	gatcgaggga	ccgaaggagc	taaccgcttt	7020
tttgacacac	atgggggatc	atgtaactcg	ccttgatcgt	tgggaaccgg	agctgaatga	7080
agccataacca	aacgacgagc	gtgacaccac	gatgcctgca	gcaatggcaa	caacgttgcg	7140

caaactatta	actggcgaac	tacttactct	agcttcccgg	caacaattaa	tagactggat	7200
ggaggcggat	aaagttgcag	gaccacttct	gcgctcggcc	cttccggctg	gctgggttat	7260
tgctgataaa	tctggagccg	gtgagcgtgg	gtctcgggt	atcattgcag	cactggggcc	7320
agatggtaag	ccctcccgt	tcgtagtatt	ctacacgacg	gggagtcagg	caactatgga	7380
tgaacgaaat	agacagatcg	ctgagatagg	tgccctactg	attaagcatt	ggtaactgtc	7440
agaccaagtt	tactcatata	tacttttagat	tgatttataaa	cttcattttt	aatttataaag	7500
gatctaggtg	aagatccttt	ttgataatct	catgaccaa	atcccttaac	gtgagttttc	7560
gttccactga	gcgtcagacc	ccgtagaaaa	gatcaaagga	tcttcttgag	atcctttttt	7620
tctgcgcgta	atctgctgct	tgcaaacaaa	aaaaccaccg	ctaccagcgg	tggtttgttt	7680
gccggatcaa	gagctaccaa	ctctttttcc	gaaggtaact	ggcttcagca	gagcgcagat	7740
accaaatact	gtccttctag	tgtagccgta	gttaggccac	cacttcaaga	actctgtagc	7800
accgcctaca	tacctcgtct	tgctaatect	gttaccagtg	gctgctgcca	gtggcgataa	7860
gtcgtgtctt	accgggttgg	actcaagacg	atagttaccg	gataaggcgc	agcggtcggg	7920
ctgaaggggg	ggttcgtgca	cacagcccag	cttggagcga	acgacctaca	ccgaactgag	7980
atacctacag	cgtgagctat	gagaaagcgc	cacgcttccc	gaaggagaga	aggcggacag	8040
gtatccggta	agcggcaggg	tcggaacagg	agagcgcacg	agggagcttc	cagggggaaa	8100
cgcttggtat	ctttatagtc	ctgtcgggtt	tcgccacctc	tgacttgagc	gtcgattttt	8160
gtgatgctcg	tcaggggggg	ggagcctatg	gaaaaacgcc	agcaacgcgg	ccttttttacg	8220
gttcctggcc	ttttgctggc	cttttgctca	catgttcttt	cctgcgttat	cccctgattc	8280
tgtggataac	cgtattaccg	cctttgagtg	agctgatacc	gctcggccga	gccgaacgac	8340
cgagcgcagc	gagtcagtga	gcgaggaagc	ggaagagcgc	ctgatgcggt	attttctcct	8400
tacgcattctg	tgcggtattt	cacaccgcat	atgggtgact	ctcagtacaa	tctgctctga	8460
tgccgcatag	ttaagccagt	atacactccg	ctatcgctac	gtgactgggt	catggctgcg	8520
ccccgacacc	cgccaacacc	cgctgacgcg	ccctgacggg	cttgtctgct	cccggcatcc	8580
gcttacagac	aagctgtgac	cgtctccggg	agctgcatgt	gtcagagggt	ttcacctgca	8640
tcaccgaaac	gcgcgaggca	gctgcggtaa	agctcatcag	cgtggctcgtg	aagcgattca	8700
cagatgtctg	cctgttcac	cgctccagc	tcgttgagtt	tctccagaag	cgttaatgtc	8760
tggttcttga	taaagcgggc	catgttaagg	gcggtttttt	cctgttttgt	cacttgatgc	8820
tcctgtgtaa	gggggaattt	ctgttcatgg	gggtaattgat	accgatgaaa	cgagagagga	8880
tgctcagat	acgggttact	gatgatgaac	atgcccgggt	actggaacgt	tgtgagggta	8940
aacaactggc	ggtagtgatg	cggcgggacc	agagaaaaat	cactcagggt	caatgccagc	9000
gcttcgttaa	tacagatgta	ggtgttccac	agggtagcca	gcagcatcct	gcgatgcctg	9060
gcgaaagggg	gatgtgctgc	aaggcgatta	agttgggtaa	cgccagggtt	ttcccagtc	9120
cgacgttgta	aaacgacggc	cagtgaattc	gagctcggta	cctgcactga	cgacaggaag	9180
agtttgtaga	aacgcaaaaa	ggccatccgt	caggatggcc	ttctgcttaa	tttgatgcct	9240
ggcagtttat	ggcggggcgtc	ctgccgcga	ccctccgggg	cgttgcttcg	caacgttcaa	9300
atccgctccc	ggcgggatttg	tcctactcag	gagagcggtc	accgacaaac	aacagataaa	9360
acgaaaggcc	cagtcttttc	actgagcctt	tcggtttatt	tgatgcctgg	cagttcccta	9420
ctctcgcatg	gggagacccc	acactaccat	cggcgctacg	actagattat	ttgtagagct	9480
catccatgcc	atgtgtaatc	ccagcagcag	ttacaaactc	aagaaggacc	atgtggtcac	9540
gcttttcgtt	gggatctttc	gaaagggcag	attgtgtcga	caggtaatgg	ttgtctggta	9600
aaaggacagg	gccatcgcca	attggagtat	ttgttgata	atggtctgct	agttgaacgg	9660
atccatcttc	aatgttggtg	cgaattttga	agtttagctt	gattccattc	ttttgtttgt	9720
ctgccgtgat	gtatacattg	tgtgagttat	agttgtactc	gagtttgtgt	ccgagaatgt	9780
ttccatcttc	tttaaaatca	atacctttta	actcgatacg	attaacaagg	gtatcacctt	9840
caaacttgac	ttcagcacgc	gtctttagat	tcccgtcatc	tttgaaagat	atagtgcgtt	9900
cctgtacata	accttcgggc	atggcactct	tgaaaaagtc	atgccgtttc	atatgatccg	9960
gataacggga	aaagcattga	acaccataag	agaaagtagt	gacaagtgtt	ggccatggaa	10020
caggtagttt	tccagtagtg	caaataaatt	taagggtaa	ctttccgtat	gtagcatcac	10080
cttcaccctc	tccactgaca	gaaaatttgt	gcccattaac	atcaccatct	aattcaacaa	10140
gaattgggac	aactccagtg	aaaagttctt	ctcctttgct	cgcagtgatt	tttttctcca	10200
tttgccggagg	gatatgaaag	cgcccgcttc	cacacattaa	actagttcga	tgattaattg	10260
tcaacagctc	gccggcggca	cctcgctaac	ggattcacca	ctccaagaat	tggagccaat	10320
cgattcttgc	ggagaactgt	gaatgccccg	acccagatcc	ggaacataat	ggtgcagggc	10380
gctgacttcc	gcgtttccag	actttacgaa	acacggaaac	cgaagaccat	tcattgttgt	10440
gctcaggtcg	cagacgtttt	gcagcagcag	tcgcttcacg	ttcgctcgcg	tatcggtgat	10500
tcattctgct	aaccctaa	gcaaccgcgc	cagcctagcc	gggtcctcaa	cgacaggagc	10560
acgatcatgc	gcacccgtgg	ccaggaccca	acgctgcccc	agatgcgccc	cgtgcggctg	10620
ctggagatgg	cggacgcgat	ggatatgttc	tgccaagggg	tggtttgcgc	attcacagtt	10680
ctccgcaaga	atcgattggc	tccaattctt	ggagtgggtg	atccgttagc	gaggtgccgc	10740
cgccgagctg	ttgacaatta	atcatcgaa	tagtttaatg	tgtggaagcg	gccgctttca	10800

tatccctccg	caaatggaga	aaaaaatcac	tggatatacc	accgttgata	tatcccaatg	10860
gcatcgtaaa	gaacattttg	aggcatttca	gtcagttgct	caatgtacct	ataaccagac	10920
cgttcagctg	gatattacgg	cctttttaaa	gaccgtaaaag	aaaaataagc	acaagtttta	10980
tccggccttt	attcacattc	ttgcccgcct	gatgaatgct	catccggaat	tccgtatggc	11040
aatgaaagac	ggtgagctgg	tgatatggga	tagtggtcac	ccttggtaca	ccgtttttcca	11100
tgagcaaact	gaaacgtttt	catcgctctg	gagtgaatac	cacgacgatt	tccggcagtt	11160
tctacacata	tattcgcaag	atgtggcgctg	ttacggtgaa	aacctggcct	atttccctaa	11220
agggtttatt	gagaatatgt	ttttcgtctc	agccaatccc	tgggtgagtt	tcaccagttt	11280
tgatttaaac	gtggccaata	tggacaactt	cttcgcccc	gttttcacca	tgggcaaata	11340
ttatacgcaa	ggcgacaagg	tgctgatgcc	gctggcgatt	caggttcac	atgccgtctg	11400
tgatggcttc	catgtcggga	gaatgcttaa	tgaattacaa	cagtactgcg	atgagtggca	11460
ggcgggggcg	taattttttt	aaggcagtta	ttgggtgcc	ttaacgcctg	gtgctacgcc	11520
tgaataagtg	ataataagcg	gatgaatggc	agaaattcga	aagcaaattc	gacctggctg	11580
tcggttcagg	gcagggtcgt	taaatagccg	cttatgtcta	ttgctggttt	acggttttatt	11640
gactaccgga	agcagtgtga	ccctgtgctt	ctcaaagcc	tgagggcagt	ttgctcaggt	11700
ctcccgtggg	ggggaataat	taacggtatg	agccttacgg	cggacggatc	gtggccgcaa	11760
gtgggtccgg	ctagaggatc	cgacaccatc	gaatgggtgca	aaacctttcg	cggtatggca	11820
tgatagcgcc	cgggaagagag	tcaattcagg	gtggtgaatg	tgaaccaggt	aacgtttatac	11880
gatgtcgcag	agtatgccgg	tgtctcttat	cagaccgttt	cccgcgtgg	gaaccaggcc	11940
agccacgttt	ctgcgaaaac	gcgggaaaaa	gtggaagcgg	cgatggcgga	gctgaattac	12000
attcccaacc	gcgtggcaca	acaactggcg	ggcaaacagt	cgttgctgat	tggcgttgcc	12060
acctccagtc	tggccctgca	cgcgccgtcg	caaattgtcg	cggcgattaa	atctcgcgcc	12120
gatcaactgg	gtgccagcgt	ggtggtgtcg	atggtagaac	gaagcggcgt	cgaagcctgt	12180
aaagcggcgg	tgcacaatct	tctcgcgcaa	cgggtcagtg	ggctgatcat	taactatccg	12240
ctggatgacc	aggatgccat	tgctgtggaa	gctgcctgca	ctaatgttcc	ggcgtttattt	12300
cttgatgtct	ctgaccagac	acctatcaac	agtattattt	tctcccatga	agacggtacg	12360
cgactgggcg	tggagcatct	ggtcgcattg	ggtcaccagc	aaatcgcgct	gttagcgggc	12420
ccattaagtt	ctgtctcggc	gcgtctgcgt	ctggctggct	ggcataaata	tctcactcgc	12480
aatcaaattc	agccgatagc	ggaacgggaa	ggcgactgga	gtgccatgtc	cggttttcaa	12540
caaaccatgc	aaatgctgaa	tgagggcatc	gttccactg	cgatgctggt	tgccaacgat	12600
cagatggcgc	tgggcgcaat	gcgcgccatt	accgagtcgc	ggctgcgcgt	tgggtcggat	12660
atctcggtag	tgggatacga	cgataccgaa	gacagctcat	gttatatccc	gccgtcaacc	12720
accatcaaac	aggattttcg	cctgctgggg	caaaccagcg	cggaccgctt	gctgcaactc	12780
tctcagggcc	aggcggtgaa	gggcaatcag	ctgttgcccc	tctcactggt	gaaaagaaaa	12840
accaccctgg	cgcccaatac	gcaaaccgcc	tctccccgcg	cgttggccga	ttcattaatg	12900
cagctggcac	gacagggtttc	ccgactggaa	agcgggcagt	gagcgcaacg	caattaatgt	12960
gagttagctc	actcattagg	cacccaggc	tttacacttt	atgcttccgg	ctcgtataat	13020
gtgtggaatt	gtgagcggat	aacaatttca	cacagcggcc	gctgagaaaa	agcgaagcgg	13080
cactgctctt	taacaattta	tcagacaatc	tgtgtgggca	ctcgaagata	cggattctta	13140
acgtcgcaag	acgaaaaatg	aataccaagt	ctcaagagtg	aacacgtaat	tcattacgaa	13200
gtttaattct	ttgagcgtca	aactttt				13227

<210> 5

<211> 8752

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 5

aaattgaaga	gtttgatcat	ggctcagatt	gaacgctggc	ggcaggccta	acacatgcaa	60
gtcgaacggg	aacaggaaga	agcttgcttc	tttgctgacg	agtggcggac	gggtgagtaa	120
tgctctggaa	actcctgat	ggagggggat	aactactgga	aacggtagct	aataccgcat	180
aacgtcgcaa	gaccaaagag	ggggaccttc	gggcctcttg	ccatcggtatg	tgcccagatg	240
ggattagcta	gtaggtgggg	taacggctca	cctaggcgac	gatccctagc	tgggtctgaga	300
ggatgaccag	ccacactgga	actgagacac	ggtccagact	cctacgggag	gcagcagtg	360
ggaatattgc	acaatgggcg	caagcctgat	gcagccatgc	cgctgtatg	aagaaggcct	420
tcgggttgta	aagtactttc	agcggggagg	aaggaggtaa	agttaatacc	tttgctcatt	480

gacgttacc	gcagaagaag	caccgggctaa	ctccgtgcc	gcagccgcgg	taatacggag	540
ggtgcaagcg	ttaatcggaa	ttactggg	ttaagcgcac	gcaggcggtt	tgttaaagtca	600
gatgtgaaat	ccccgggctc	aacctgggaa	ctgcatctga	tactggcaag	cttgagtcctc	660
gtagaggggg	gtagaattcc	aggtgtagcg	gtgaaatg	tagagatctg	gaggaataacc	720
ggtggcggaag	ggggccccct	ggacgaagac	tgacgctcag	gtgcgaaagc	gtggggagca	780
aacaggatta	gataccctgg	tagtccacgc	cgtaaaccgat	gtcgacttgg	aggttgtgcc	840
cttgaggcg	ggcttccgga	gctaaccgct	taagtcgacc	gcctggggag	tacggccgca	900
aggttaaaac	tcaaataaat	tgacgggggc	ccgcacaagc	ggcggagcat	gtggattaat	960
tcgatgcaac	gcgaagaacc	ttacctgggt	ttgacatgca	caggacgcgt	ctagagatag	1020
gcgttccctt	gtggcctgtg	tgcaggtgg	gcatggctgt	cgtcagctcg	tgctcgtgaga	1080
tggtggggtta	agtccccgaa	cgagcgcaac	ccttgtctca	tggtgccagc	acgtaatgg	1140
ggggagctcg	gagagactgc	cggggtcaac	ctggggaag	gtggggatga	cgtaagtc	1200
tcattgcccc	tatgtccagg	gcttcacaca	tgctacaatg	gccgggtacaa	aggggtcgca	1260
tgccgcgagg	ttaagcgaat	ccttaaaagc	cggtctcagt	tcggatcg	gtctgcaact	1320
cgaccccg	aagtcggagt	cgctagtaat	cgcagatcag	caacgctgcg	gtgaatacgt	1380
tcccgggct	tgtacacacc	gcccgtcacg	tcattgaaagt	cggtaacacc	cgaagccagt	1440
ggcctaacc	tcgggaggga	gctgtcgaag	gtgggatcgg	cgattgggac	gaagtcgtaa	1500
caaggttaacc	gtaggggaac	ctgcggttgg	atcatgggat	taccttaaag	aagcgtactt	1560
tgtagtgctc	acacagattg	tctgatagaa	agtgaagagc	aaggcgttta	cgcggtggga	1620
gtgaggctga	agagataaag	gccgttcgct	ttctattaat	gaaagctcac	cctacacgaa	1680
aatatcacgc	aacgcgtgat	aagcaatttt	ctgttcccc	tcgtctagac	gtagcgccga	1740
tggtagtgtg	gggtctcccc	atgcgagagt	agggaaactgc	caggcatcaa	ataaaacgaa	1800
aggctcagtc	gaaagactgg	gcctttcgtt	ttatctgttg	tttgctcggtg	aacgctctcc	1860
tgagtaggac	aaatccgccc	ggagcggatt	tgaacgttgc	gaagcaacgg	cccggagggt	1920
ggcgggcagg	acgcccgcga	taaactgcca	ggcatcaaat	taagcagaag	gccatcctga	1980
cggatggcct	ttttgcggtt	ctacaaactc	ttcctgtcgt	cactgcaggc	atgcaagctt	2040
ggcgtaatca	tggtcatagc	tgtttccctgt	gtgaaattgt	tatccgctca	caattccaca	2100
caacatacga	gccggaagca	taaagtgtaa	agcctgggg	gcctaattgag	tgagctaact	2160
cacattaatt	gcgttgccgt	cactgcccgc	ttccagtcg	ggaaacctgt	cggtccagct	2220
gcattaatga	atcggaacc	gcccggggag	agggcgtttg	cgatttgggc	gctcttcgcg	2280
ttcctcgctc	actgactcgc	tgcgctcggt	cggttcggctg	cggcgagcgg	tatcagctca	2340
ctcaaaggcg	gtaatacgg	tatccacaga	atcaggggat	aacgcaggaa	agaacatgtg	2400
agcaaaaggc	cagcaaaagg	ccaggaaccg	taaaaaggcc	gcgttgctgg	cgtttttcca	2460
taggctccgc	ccccctgacg	agcatcacaa	aaatcgacgc	tcaagtcaga	ggtggcgaaa	2520
cccgcacagga	ctataaagat	accaggcggt	tccccctgga	agctccctcg	tgcgctctcc	2580
tgttccgacc	ctgccgctta	ccggatacct	gtccgccttt	ctcccttcgg	gaagcgtggc	2640
gctttctcat	agctcacgct	gtaggtatct	cagttcgggtg	taggtcgctt	gctccaagct	2700
gggctgtgtg	cacgaacccc	ccgttcagcc	cgaccgctgc	gccttatccg	gtaactatcg	2760
tcttgagtc	aacccggtaa	gacacgactt	atcgccactg	gcagcagcca	ctggtaacag	2820
gattagcaga	gcgagggtatg	taggcgggtgc	tacagagttc	ttgaagtgg	ggcctaacta	2880
cggctacact	agaaggacag	tatttggtat	ctgcgctctg	ctgaagccag	ttaccttcgg	2940
aaaaagagtt	ggtagctctt	gatccggcaa	acaaaccacc	gctggtagcg	gtgggttttt	3000
tgtttgcaag	cagcagatta	cgcgcagaaa	aaaaggatct	caagaagatc	ctttgatctt	3060
ttctacgggg	tctgacgctc	agtggaacga	aaactcacgt	taagggattt	tggtcatgag	3120
attatcaaaa	aggatcttca	cctagatcct	tttaaattaa	aatgaagt	ttaaatcaat	3180
ctaaagtata	tatgagtaaa	cttggtctga	cagttacca	tgcttaata	gtgaggcacc	3240
tatctcagcg	atctgtctat	ttcgttcac	catagtggc	tgactccccg	tcgtgtagat	3300
aactacgata	cgggagggt	taccatctgg	ccccagtgt	gcaatgatac	cgcgagaccc	3360
acgctcaccg	gctccagatt	tatcagcaat	aaaccagcca	gccggaagg	ccgagcgcag	3420
aagtggctct	gcaactttat	ccgcctccat	ccagtctatt	aattgttgcc	gggaagctag	3480
agtaagtagt	tcgccagtta	atagtttgcg	caacgttggt	gccattgcta	caggcatcgt	3540
ggtgtcacgc	tcgtcgtttg	gtatggcttc	attcagctcc	ggttcccaac	gatcaaggcg	3600
agttacatga	tcccccatgt	tgtgcaaaaa	agcgggttagc	tccttcggtc	ctccgatcgt	3660
tgtcagaagt	aagttggccg	cagtgttatc	actcatgggt	atggcagcac	tgcataattc	3720
tcttactgtc	atgccatccg	taagatgctt	ttctgtgact	ggtgagtact	caaccaagtc	3780
attctagaaa	tagtgtatgc	ggcgaccgag	ttgctcttgc	cggcgctcaa	tacgggataa	3840
taccgcgcca	catagcagaa	ctttaaaagt	gctcatcatt	ggaaaacgtt	cttcggggcg	3900
aaaactctca	aggatcttac	cgctgttgag	atccagttcg	atgtaaccca	ctcgtgcacc	3960
caactgatct	tcagcatctt	ttactttcac	cagcgtttct	gggtgagcaa	aaacaggaag	4020
gcaaaatgcc	gcaaaaaagg	gaataagggc	gacacggaaa	tggtgaatac	tcatactctt	4080
cctttttcaa	tattattgaa	gcatttatca	gggttattgt	ctcatgagcg	gatacatatt	4140

tgaatgtatt	tagaaaaata	aacaaatagg	ggttccgcgc	acatttcccc	gaaaagtgcc	4200
acctgacgtc	taagaaacca	ttattatcat	gacattaacc	tataaaaaata	ggcgtatcac	4260
gaggcccttt	cgtctcgcgc	gtttcgggtga	tgacgggtgaa	aacctctgac	acatgcagct	4320
cccgagacg	gtcacagctt	gtctgtaagc	ggatgccggg	agcagacaag	cccgtcaggg	4380
cgcgtcagcg	ggtgttggcg	ggtgtcgggg	ctggcttaac	tatgcggcat	cagagcagat	4440
tgtactgaga	gtgcaccata	tgcggtgtga	aataccgcac	agatgcgtaa	ggagaaaata	4500
ccgcatcagg	cgccattcgc	cattcaggct	gcgcaactgt	tgggaagggc	gatcggtgcg	4560
ggcctcttcg	ctattacgcc	agctggcgaa	agggggatgt	gctgcaaggc	gattaagttg	4620
ggtaacgcca	gggttttccc	agtcacgacg	ttgtaaaacg	acggccagtg	aattcgagct	4680
cggtaacctgc	agtgcgcaga	ggaagagttt	gtagaaacgc	aaaaaggcca	tccgtcagga	4740
tggcctcttcg	cttaatttgc	tgcctggcag	tttatggcgg	gcgtcctgcc	cgccaccctc	4800
cgggcccgttg	cttcgcgaacg	ttcaaatccg	ctcccgcgcg	atttgtccta	ctcaggagag	4860
cgttcaccga	caaacaacag	ataaaacgaa	aggcccagtc	tttcgactga	gcctttcggt	4920
ttattttgatg	cctggcagtt	ccctactctc	gcatggggag	accccacact	accatcggcg	4980
ctacgtctag	attattttgta	gagctcatcc	atgccatgtg	taatcccagc	agcagttaca	5040
aactcaagaa	ggaccatgtg	gtcacgcctt	tcgttgggat	ctttcgaaag	ggcagattgt	5100
gtcgacaggt	aatggtttgtc	tggtaaaagg	acagggccat	cgccaattgg	agtattttgt	5160
tgataatggt	ctgctagtgt	aacggatcca	tcttcaatgt	tgtggcggaat	tttgaagtta	5220
gctttgatcc	cattctttttg	tttgtctgcc	gtgatgtata	cattgtgtga	gttatagttg	5280
tactcgagtt	tgtgtccgag	aatgtttcca	tcttctttaa	aatcaatacc	ttttaactcg	5340
atacagattaa	caaggggtatc	accttcaaac	ttgacttcag	cacgcgtctt	gtagttcccc	5400
tcactctttga	aagatatagt	gcgttctctgt	acataacctt	cgggcatggc	actcttgaaa	5460
aagtcatgcc	gtttcatatg	atccggataa	cgggaaaagc	attgaacacc	ataagagaaa	5520
gtagtgacaa	gtgttggcca	tggaaacaggt	agttttccag	tagtgcaa	aaatttaagg	5580
gtaagctttc	cgtatgtagc	atcaccttca	ccctctccac	tgacagaaaa	tttgtgccca	5640
ttaacatcac	catctaattc	aacaagaatt	gggacaactc	cagtgaagaa	ttcttctcct	5700
ttgctagcag	tgattttttt	ctccatttgc	ggagggatat	gaaagcggcc	gcttccacac	5760
attaaactag	ttcgatgatt	aattgtcaac	agctgcgcgg	cggcacctcg	ctaacggatt	5820
caccactcca	agaattggag	ccaatcgatt	cttgcggaga	actgtgaatg	cgggtaccca	5880
gatccggaac	ataatggtgc	agggcgctga	cttccgcgtt	tccagacttt	acgaaacacg	5940
gaaaccgaag	accattcatg	ttgttgctca	ggtcgcagac	gttttgagc	agcagtcgct	6000
tcacgttcgc	tcgcgtatcg	gtgattcatt	ctgctaacca	gtaaggcaac	cccgccagcc	6060
tagccgggtc	ctcaacgaca	ggagcacgat	catgcgcacc	cgtggccagg	acccaacgct	6120
gcccagagatg	cgcgcgctgc	ggctgctgga	gatggcggac	gcgatggata	tgttctgcca	6180
agggttgggt	tgcgcattca	cagttctccg	caagaatcga	ttggctccaa	ttcttgaggt	6240
ggtgaatccg	ttagcgaggt	gccgcggcg	agctgttgac	aattaatcat	cgaactagtt	6300
taatgtgtgg	aagcggccgc	tttcatatcc	ctccgcaaat	ggagaaaaaa	atcactggat	6360
ataccaccgt	tgatatatcc	caatggcatc	gtaagaaaca	ttttgaggca	tttcagtcag	6420
ttgctcaatg	tacctataac	cagaccgttc	agctggatat	tacggccttt	ttaaagaccg	6480
taaagaaaaa	taagcacaag	ttttatccgg	cctttattca	cattcttgcc	cgcctgatga	6540
atgctcatcc	ggaattccgt	atggcaatga	aagacggtga	gctggtgata	tgggatagtg	6600
ttcacccttg	ttacaccgtt	ttccatgagc	aaactgaaac	gttttcatcg	ctctggagtg	6660
aataccacga	cgatttccgg	cagtttctac	acatatattc	gcaagatgtg	gcgtgttacg	6720
gtgaaaacct	ggcctatattc	cctaaagggt	ttattgagaa	tatgtttttc	gtctcagcca	6780
atccctgggt	gagtttcacc	agttttgatt	taaacgtggc	caatatggac	aacttcttcg	6840
ccccggtttt	caccatgggc	aaatattata	cgcaaggcga	caaggtgctg	atgccgctgg	6900
cgattcaggt	tcacatgcc	gtctgtgatg	gcttccatgt	cggcagaatg	cttaatgaat	6960
tacaacagta	ctgcgatgag	tggcagggcg	gggcgtaatt	tttttaaggc	agttattgggt	7020
gcccttaaac	gcctggtgct	acgcctgaat	aagtgataat	aagcggatga	atggcagaaa	7080
ttcgaaagca	aattcgaccc	ggtcgtcggg	tcagggcagg	gtcgttaaat	agccgcttat	7140
gtctattgct	ggtttacggg	ttattgacta	cccgaagcag	tgtgaccctg	tgcttctcaa	7200
atgcctgagg	gcagtttgct	caggtctccc	gtggggggga	ataattaacg	gtatgagcct	7260
tacggcggac	ggatcggtgg	cgcaagtggg	tccggctaga	ggatccgaca	ccatcgaaatg	7320
gtgcaaaacc	tttcgcggta	tggcatgata	gcgcccggaa	gagagtcaat	tcagggtgggt	7380
gaatgtgaaa	ccagtaacgt	tatacagatg	cgcagagtat	gccggtgtct	cttatcagac	7440
cgtttccgcg	gtggtgaacc	agggcagcca	cgtttctgcg	aaaacgcggg	aaaaagtggg	7500
agcggcgatg	gcggagctga	attacattcc	caaccgcgtg	gcacaacaac	tggcgggcaa	7560
acagtcggtg	ctgattggcg	ttgccacctc	cagtcctggc	ctgcacgcgc	cgtcgcaaat	7620
tgctcgggcg	attaaatctc	gcgccgatca	actgggtgcc	agcgtgggtg	tgctgatgggt	7680
agaacgaagc	ggcgtcgaag	cctgtaaagc	ggcgggtgcac	aatcttctcg	cgcaacgggt	7740
cagtggggctg	attattaact	atccgctgga	tgaccaggat	gccattgctg	tggaagctgc	7800

```

ctgcactaat gttccggcgt tatttcttga tgtctctgac cagacaccca tcaacagtat 7860
tattttctcc catgaagacg gtacgcgact gggcgtggag catctggtcg cattgggcca 7920
ccagcaaate gcgctgtag cgggccatt aagttctgtc tcggcgcgtc tgcgtctggc 7980
tggtctggcat aaatatctca ctgcgaatca aattcagccg atagcggaac gggaaggcga 8040
ctggagtgcc atgtccggtt ttcaacaaac catgcaaagt ctgaatgagg gcatcgttcc 8100
cactgcgatg ctggttgcca acgatcagat ggcgctgggc gcaatgcgcg ccattaccga 8160
gtccgggctg cgcgttggtg cggatatctc ggtagtggga tacgacgata ccgaagacag 8220
ctcatgttat atcccgccgt caaccacat caaacaggat ttctgcctgc tggggcaaac 8280
cagcgtggac cgcttgctgc aactctctca gggccaggcg gtgaaggcca atcagctgtt 8340
gcccgtctca ctggtgaaaa gaaaaaccac cctggcgccc aatacgcaaa ccgcctctcc 8400
ccgcgcgttg gccgattcat taatgcagct ggcacgacag gtttcccgac tggaaagcgg 8460
gcagtgcgcg caacgcaatt aatgtgagtt agctcactca ttaggcaccc caggctttac 8520
actttatgct tccggctcgt ataattgtgtg gaattgtgag cggataacaa tttcacacag 8580
cggccgctga gaaaaagcga agcggcactg ctctttaaca atttatcaga caatctgtgt 8640
gggcactcga agatacggat tcttaacgtc gcaagacgaa aaatgaatac caagtctcaa 8700
gagtgaacac gtaattcatt acgaagtta attctttgag cgtcaaactt tt 8752

```

```

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> primer

```

```

<400> 6
ataggggttc cgcgcacatt 20

```

```

<210> 7
<211> 48
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> primer

```

```

<400> 7
ctcgagcctc ctgaaagcgg ccgcaactca aaaaatacgc ccggtagt 48

```

```

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> primer

```

```

<400> 8
aaatcgtcgt ggtattcact 20

```

```

<210> 9
<211> 44
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> primer

```

```

<400> 9

```

gcggccgctt tcaggaggct cgagaaatgg agaaaaaat cact

44

<210> 10

<211> 59

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 10

ggccgctagc cggcgagctg ttgacaatta atcatcgaac tagtttaatg tgtggaagc 59

<210> 11

<211> 59

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 11

ggccgcttcc acacattaaa ctagttcgat gattaattgt caacagctcg ccggctagc 59

<210> 12

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 12

tcgagcacac tgaaagc

17

<210> 13

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 13

ggccgctttc agtgtgc

17

<210> 14

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 14

ggcataggc ggccgctgtg tgaaattgtt atccgctcac aattccacac attatacgag 60
ccggaagc 68

<210> 15

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 15

ttggatccga caccatcgaa tggcgcaaaa cctt

34

<210> 16

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 16

gaagggatcc ggcgaagatg tttctctgg

29

<210> 17

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 17

gcggccgctt aaaataattt tctgacc

27

<210> 18

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 18

ccacaagctt cgcacctgag cgtcagtctt c

31

<210> 19

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 19

aaaattattt taagcggccg ctgagaaaaa gcgaagc

37

<210> 20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 20

ggcgactttc actcacaaac

20

<210> 21

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 21

gtcgaagctt ggtaaccgta ggggaacctg cggttggatc acacacttac cttaaagaag 60
cgtac 65

<210> 22

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<221> misc_feature

<222> 34, 35, 36, 37

<223> n = A,T,C or G

<400> 22

ttaatgtgtg gaagcggccg ctttcatatc cctnnnnaaa tggagaaaaa aatc 54

<210> 23

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 23

cagcaccttg tcgccttgc 19

<210> 24

<211> 11

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 24

caggaggcuc g 11

<210> 25

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 25

ucaccuccu a 11

<210> 26
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 26
 cagugugcuc g 11

<210> 27
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 27
 ucacacacuu a 11

<210> 28
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 28
 cauaucuccuc g 11

<210> 29
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 29
 ucagggauuu a 11

<210> 30
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 30
 caaacaccuc g 11

<210> 31
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>	
<223> primer	
<400> 31	
ucaagagguu a	11
<210> 32	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 32	
cauaccucuc g	11
<210> 33	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 33	
ucaugagguu a	11
<210> 34	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 34	
cauaauccuc g	11
<210> 35	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 35	
ucagaggauu a	11
<210> 36	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 36	
caaauaccuc g	11

<210> 37
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 37

ucaugagguu a 11

<210> 38
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 38
 cacauaccuc g 11

<210> 39
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 39
 ucaugagguu a 11

<210> 40
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 40
 caccgaccuc g 11

<210> 41
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 41
 ucaagagguu a 11

<210> 42
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

 <400> 42
 cauaucucc g 11

 <210> 43
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 43
 ucaugggau a 11

 <210> 44
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 44
 caacuaccuc g 11

 <210> 45
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 45
 ucaugaggu a 11

 <210> 46
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 46
 cauauaccuc g 11

 <210> 47
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 47
 ucaagaggu a 11

<210> 48
 <211> 18
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 48
 cauaucuccuc gagaaaug 18

<210> 49
 <211> 14
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 49
 ggaucauggg auua 14

<210> 50
 <211> 18
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 50
 cauaucuccuc gagaaaug 18

<210> 51
 <211> 14
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 51
 ggaucaccuc cuua 14

<210> 52
 <211> 18
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 52
 cauaucuccuc cgcaaaug 18

<210> 53
 <211> 14
 <212> RNA
 <213> Artificial Sequence

<220>	
<223> primer	
<400> 53	
ggaucauggg auua	14
<210> 54	
<211> 18	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 54	
cauaucccuc cgcaaaug	18
<210> 55	
<211> 14	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 55	
ggaucaccuc cuua	14
<210> 56	
<211> 18	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 56	
cauaucccuc cugaaaug	18
<210> 57	
<211> 14	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 57	
ggaucauggg auua	14
<210> 58	
<211> 17	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 58	
cauaucccuc ccaaaug	17

<210> 59
 <211> 14
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 59
 ggaucauggg auua 14

<210> 60
 <211> 18
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 60
 cauaucuccuc cacaaaug 18

<210> 61
 <211> 14
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 61
 ggaucauggg auua 14

<210> 62
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 62
 caggaggcuc g 11

<210> 63
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 63
 ucaccuccuu a 11

<210> 64
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>	
<223> primer	
<400> 64	
caaucccccuc g	11
<210> 65	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 65	
ucaagggauu a	11
<210> 66	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 66	
cauaccucuc g	11
<210> 67	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 67	
ucaaugggau a	11
<210> 68	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 68	
cacaguccuc g	11
<210> 69	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 69	
ucagacgauu a	11

<210> 70
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 70
 caaaccacuc g 11

<210> 71
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 71
 ucagugauuu a 11

<210> 72
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 72
 cauagcccuc g 11

<210> 73
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 73
 ucauuggguu a 11

<210> 74
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 74
 caucuuccuc g 11

<210> 75
 <211> 11
 <212> RNA
 <213> Artificial Sequence

```

<220>
<223> primer

<400> 75
ucaggagguu a 11

<210> 76
<211> 11

<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 76
caauaucuc g 11

<210> 77
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 77
ucagaauuuu a 11

<210> 78
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 78
cacagaacuc g 11

<210> 79
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 79
ucaaucaguu a 11

<210> 80
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 80

```

caaaguucuc g	11
<210> 81	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 81	
ucaaugaguu a	11
<210> 82	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 82	
caauucacuc g	11
<210> 83	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 83	
ucagugaaau a	11
<210> 84	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 84	
caacucacuc g	11
<210> 85	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 85	
ucagaguguu a	11
<210> 86	
<211> 11	
<212> RNA	
<213> Artificial Sequence	

<220>
<223> primer

<400> 86
caacccacuc g 11

<210> 87
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 87
ucaugggauu a 11

<210> 88
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 88
caucguucuc g 11

<210> 89
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 89
ucaaagaguu a 11

<210> 90
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 90
cacaccacuc g 11

<210> 91
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 91

ucaugguuuu a	11
<210> 92	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 92	
cacccaccuc g	11
<210> 93	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 93	
ucaaaggguu a	11
<210> 94	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 94	
caucccacuc g	11
<210> 95	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 95	
ucaagggguu a	11
<210> 96	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 96	
caaacuccuc g	11
<210> 97	
<211> 11	
<212> RNA	
<213> Artificial Sequence	

<220>
<223> primer

<400> 97
ucauacuauu a 11

<210> 98
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 98
cauacaucuc g 11

<210> 99
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 99
ucaagaguuu a 11

<210> 100
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 100
caacucucuc g 11

<210> 101
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 101
ucaggagauu a 11

<210> 102
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 102
caaauaucuc g 11

<210> 103
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 103
 ucagagauuu a 11

<210> 104
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 104
 cauaccucuc g 11

<210> 105
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 105
 ucaugagguu a 11

<210> 106
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 106
 cauaguacuc g 11

<210> 107
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 107
 ucauggauuu a 11

<210> 108
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>	
<223> primer	
<400> 108	
caauccacuc g	11
<210> 109	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 109	
ucaguggauu a	11
<210> 110	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 110	
cacagaucuc g	11
<210> 111	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 111	
ucaggcuuuu a	11
<210> 112	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 112	
cauagcacuc g	11
<210> 113	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 113	
ucaugcuauu a	11

<210> 114
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 114
 caacuaacuc g 11

<210> 115
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 115
 ucauaguguu a 11

<210> 116
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 116
 caaauaucuc g 11

<210> 117
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 117
 ucaagguauu a 11

<210> 118
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 118
 caaauaucuc g 11

<210> 119
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>

<223> primer

<400> 119
ucaggagauu a

11

<210> 120
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 120
cacuccucuc g

11

<210> 121
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 121
ucagaggauu a

11

<210> 122
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 122
cauauuccuc g

11

<210> 123
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 123
ucauggaauu a

11

<210> 124
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 124
caaccuacuc g

11

<210> 125

<211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 125
 ucaggagauu a 11

<210> 126
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 126
 caauccacuc g 11

<210> 127
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 127
 ucaggagauu a 11

<210> 128
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 128
 caacccccuc g 11

<210> 129
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 129
 ucagaggguu a 11

<210> 130
 <211> 11
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 130 caaacaucuc g	11
<210> 131 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 131 ucaagauguu a	11
<210> 132 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 132 caucccacuc g	11
<210> 133 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 133 ucaggguaau a	11
<210> 134 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 134 cacugaucuc g	11
<210> 135 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 135 ucagaggauu a	11
<210> 136 <211> 11	

<212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 136
 cauaucuccuc g

 <210> 137
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 137
 ucagggauuu a

 <210> 138
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 138
 caaacaccuc g

 <210> 139
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 139
 ucaagagguu a

 <210> 140
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 140
 caacgaacuc g

 <210> 141
 <211> 11
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

11

11

11

11

11

<400> 141 ucagaguguu a	11
<210> 142 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 142 caucuaucuc g	11
<210> 143 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 143 ucaggagauu a	11
<210> 144 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 144 cauaccucuc g	11
<210> 145 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 145 ucaugagguu a	11
<210> 146 <211> 11 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 146 cauaaacuc g	11
<210> 147 <211> 11 <212> RNA	

<213> Artificial Sequence

<220>

<223> primer

<400> 147

ucaagagauu a

11

<210> 148

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 148

caaaauaccuc g

11

<210> 149

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 149

ucaugagguu a

11

<210> 150

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 150

cacauaccuc g

11

<210> 151

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 151

ucaugagguu a

11

<210> 152

<211> 11

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 152

caccgaccuc g	11
<210> 153	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 153	
ucaagagguu a	11
<210> 154	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 154	
cauaucccuc g	11
<210> 155	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 155	
ucaugggguu a	11
<210> 156	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 156	
caacuaccuc g	11
<210> 157	
<211> 11	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 157	
ucaugagguu a	11
<210> 158	
<211> 11	
<212> RNA	
<213> Artificial Sequence	

<220>
<223> primer

<400> 158
cauauaccuc g

11

<210> 159
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 159
ucaagagguu a

11

<210> 160
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 160
auuagauac

9

<210> 161
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 161
auuagguaa

9

<210> 162
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 162
auucgacau

9

<210> 163
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 163
aaauagguac

9

<210> 164
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 164
 aaauagucuc 9

<210> 165
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 165
 auuagcuac 9

<210> 166
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 166
 auucgacac 9

<210> 167
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 167
 acuagcaca 9

<210> 168
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 168
 acuagcuuc 9

<210> 169
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>	
<223> primer	
<400> 169	
aaauagauac	9
<210> 170	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 170	
aaauaguauc	9
<210> 171	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 171	
aaucgccuc	9
<210> 172	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 172	
gauagguau	9
<210> 173	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 173	
auuaggcac	9
<210> 174	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 174	
aaauagguuc	9

<210> 175
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 175
 aaauagucuaa 9

<210> 176
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 176
 aaucgucuc 9

<210> 177
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 177
 auuagaaaa 9

<210> 178
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 178
 auuagcgac 9

<210> 179
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 179
 auuaggagc 9

<210> 180
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>

<223> primer

<400> 180
auuaggcaa

9

<210> 181
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 181
aguagccuc

9

<210> 182
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 182
aguagcuuc

9

<210> 183
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 183
aguaggauuc

9

<210> 184
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 184
aguagguuc

9

<210> 185
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 185
aguagucuc

9

<210> 186

<211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 186
 acuagauau 9

<210> 187
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 187
 acuagaucc 9

<210> 188
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 188
 acuagcaac 9

<210> 189
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 189
 acuagcauc 9

<210> 190
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 190
 acuagcuaa 9

<210> 191
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 191 acuaggcuc	9
<210> 192 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 192 acuaguaac	9
<210> 193 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 193 acuaguauc	9
<210> 194 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 194 acuaguuuc	9
<210> 195 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 195 aauagauuc	9
<210> 196 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 196 aauagcagc	9
<210> 197 <211> 9	

<212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 197
 aaugccaa 9

<210> 198
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 198
 aaugccac 9

<210> 199
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 199
 aaugccua 9

<210> 200
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 200
 aaugcuua 9

<210> 201
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 201
 guaguau 9

<210> 202
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 202 gguaguagu	9
<210> 203 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 203 gguagucag	9
<210> 204 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 204 gauaguagu	9
<210> 205 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 205 aauagaaac	9
<210> 206 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 206 guuagauag	9
<210> 207 <211> 9 <212> RNA <213> Artificial Sequence	
<220> <223> primer	
<400> 207 gguagcuuu	9
<210> 208 <211> 9 <212> RNA	

<213> Artificial Sequence

<220>

<223> primer

<400> 208

gguaguuug

9

<210> 209

<211> 9

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 209

auucggaaa

9

<210> 210

<211> 9

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 210

auuggagac

9

<210> 211

<211> 9

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 211

acuagacgc

9

<210> 212

<211> 9

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 212

acuagccaa

9

<210> 213

<211> 9

<212> RNA

<213> Artificial Sequence

<220>

<223> primer

<400> 213

acuaggcua	9
<210> 214	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 214	
aaauagcaca	9
<210> 215	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 215	
aaauagucau	9
<210> 216	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 216	
aaauagucca	9
<210> 217	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 217	
cuuaguuaa	9
<210> 218	
<211> 9	
<212> RNA	
<213> Artificial Sequence	
<220>	
<223> primer	
<400> 218	
guuagagau	9
<210> 219	
<211> 9	
<212> RNA	
<213> Artificial Sequence	

<220>
<223> primer

<400> 219
guuagucau 9

<210> 220
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 220
gguagccuu 9

<210> 221
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 221
gguaggaau 9

<210> 222
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 222
gguaggauag 9

<210> 223
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 223
gguaggauuu 9

<210> 224
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 224
gguaguuuu 9

<210> 225
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 225
 gauagccuu 9

<210> 226
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 226
 gauaguccu 9

<210> 227
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 227
 auuagauga 9

<210> 228
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 228
 aguagcuuu 9

<210> 229
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 229
 aguaguuag 9

<210> 230
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

 <400> 230
 agucgccuc

 <210> 231
 <211> 9
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 231
 acuagaguc

 <210> 232
 <211> 9
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 232
 aaucgcagc

 <210> 233
 <211> 9
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 233
 cauaguuuu

 <210> 234
 <211> 9
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 234
 gguagaugu

 <210> 235
 <211> 9
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 235
 gguagucgu

9

9

9

9

9

9

<210> 236
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 236
 ggucgcuaau 9

<210> 237
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 237
 gcuaguaag 9

<210> 238
 <211> 9
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 238
 gguagguug 9

<210> 239
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 239
 gacaatctgt gtgagcacta 20

<210> 240
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 240
 tgccagcagc cgcggtataa cggagggtgc aagcgt 36

<210> 241
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>

<223> primer

<400> 241
cctgttttgc cccacgctt tcgcacctga gcg

33

<210> 242
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<221> misc_feature
<222> 32, 33, 34, 35, 36, 37, 38, 39, 40
<223> n = A,T,C or G

<400> 242
ctcaggtgcg aaagcgtggg gagcaaacag gnnnnnnnnn cctggtagtc cacgccgtaa 60

<210> 243
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<221> misc_feature
<222> 32, 40
<223> n = A,T,C or G

<400> 243
ctcaggtgcg aaagcgtggg gagcaaacag gnttagatan cctggtagtc cacgccgtaa 60

<210> 244
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 244
ggactaccag ggtatct

17

<210> 245
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 245
tacggcgtgg actacca

17